

AN ANALYSIS OF AUSTEC INC  
AND ITS MAJOR PRODUCTS

INPUT



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# INPUT®

Planning Services for Management

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# AN ANALYSIS OF AUSTEC, INC. AND ITS MAJOR PRODUCTS

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for  
Kawasaki Steel

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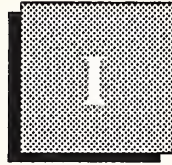
# Introduction





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# Introduction

## A

### Purpose of Study

INPUT has been engaged by Kawasaki Steel to undertake a confidential evaluation of Austec, Inc. The study is intended to investigate the competitiveness of Austec's products and to determine the strength of its product development capability.

## B

### Scope

The objective of this research was to gather a wide range of information about Austec, Inc., including the following:

- Company Background
- Management Assets and other Resources
- Financial Information
- Products and Technologies
- Competitive Market Position
- Numerous other data to assess the quality of Austec's Products and Corporate Resources

## C

### Methodology

INPUT developed lists of hardware OEMs, Software Developers, and Austec competitors to form the initial target list of companies to be interviewed. We started with lists of:

- Over 30 Hardware OEMs that were likely to be customers of Austec.
- Over 200 Software Developers who were known to have done business with either Austec or Ryan-McFarland, a company that Austec recently acquired.

- Ten companies who were believed to be competitors of Austec.

INPUT developed two questionnaires, shown in Appendix B. One was used to interview customers. The second was used to gather information from competitors.

The project had the following specific goals:

- Interview, by telephone, at least two members of Austec's management team.
- On a best-efforts basis, interview 40 customers, including 5 on-site interviews. We hoped to interview 15 computer manufacturers, 15 software developers, and 10 end users or government customers.
- Interview 5 Austec competitors, of which 2 were to be on-site.

We obtained a sufficient number of interviews to be confident that our sample is meaningful and unambiguous. The distribution of successful interviews is shown in Exhibit I-1.

EXHIBIT I-1

### PROFILE OF INTERVIEWING ACTIVITY

TYPE OF SOURCE	# INTERVIEWED	# ON-SITE
Company Management	2	2
Competitor	5	1
Hardware OEM	11	5
Software Developer	17	0
Other source	2	1
TOTAL	37	9



INPUT scheduled personal appointments with two Austec executives. These interviews took place without revealing the nature of our study or our client, and proved very valuable in developing a good perspective about the company's strategies and marketing focus.

We were unable to identify any end-user customers or government agency customers. Our interviews with Austec management were not helpful in identifying any names of customers in this group.

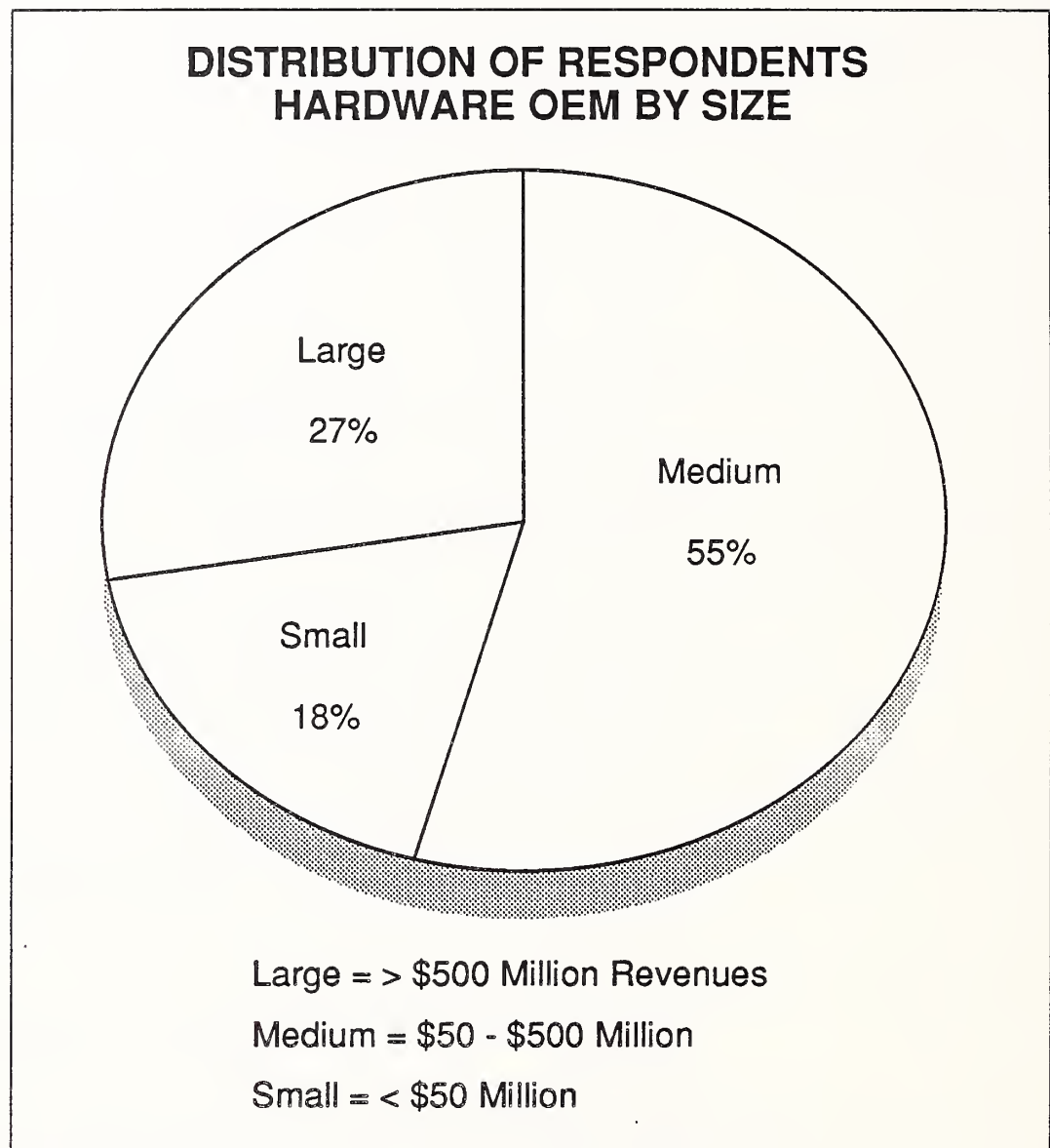
INPUT identified a company that was in the process of selecting a vendor and a new COBOL compiler. People at that company were willing to be interviewed and provided very valuable insights, because all information they had obtained from the suppliers was current and obtained under real marketing circumstances.

Our analysis of the survey results has found that in some cases it is meaningful to separate the customer replies into those from hardware OEMs and those from the rest of Austec's customer base, which we refer to as "software developers."

The distribution of respondents among hardware OEMs and software developers was very representative of the Austec customer base. We also found that the distribution within each group was representative of the mix of vendors in the industry.

Hardware OEMs fell into three groups: large (with revenues over \$500 million per year), medium (with revenues in the range from \$50 million to \$500 million per year), and small (with revenues under \$50 million per year). Exhibit I-2 shows the distribution of hardware OEMs we surveyed.

EXHIBIT I-2



We grouped software developers by the number of employees. Large developers had over 100 employees, medium had between 20 and 100 employees, and small had under 20. Exhibit I-3 shows the distribution of the 17 software developers that we contacted. Sixty-four percent of this group were in the small category. This percentage appears to be representative of Austec's customer base.

EXHIBIT I-3

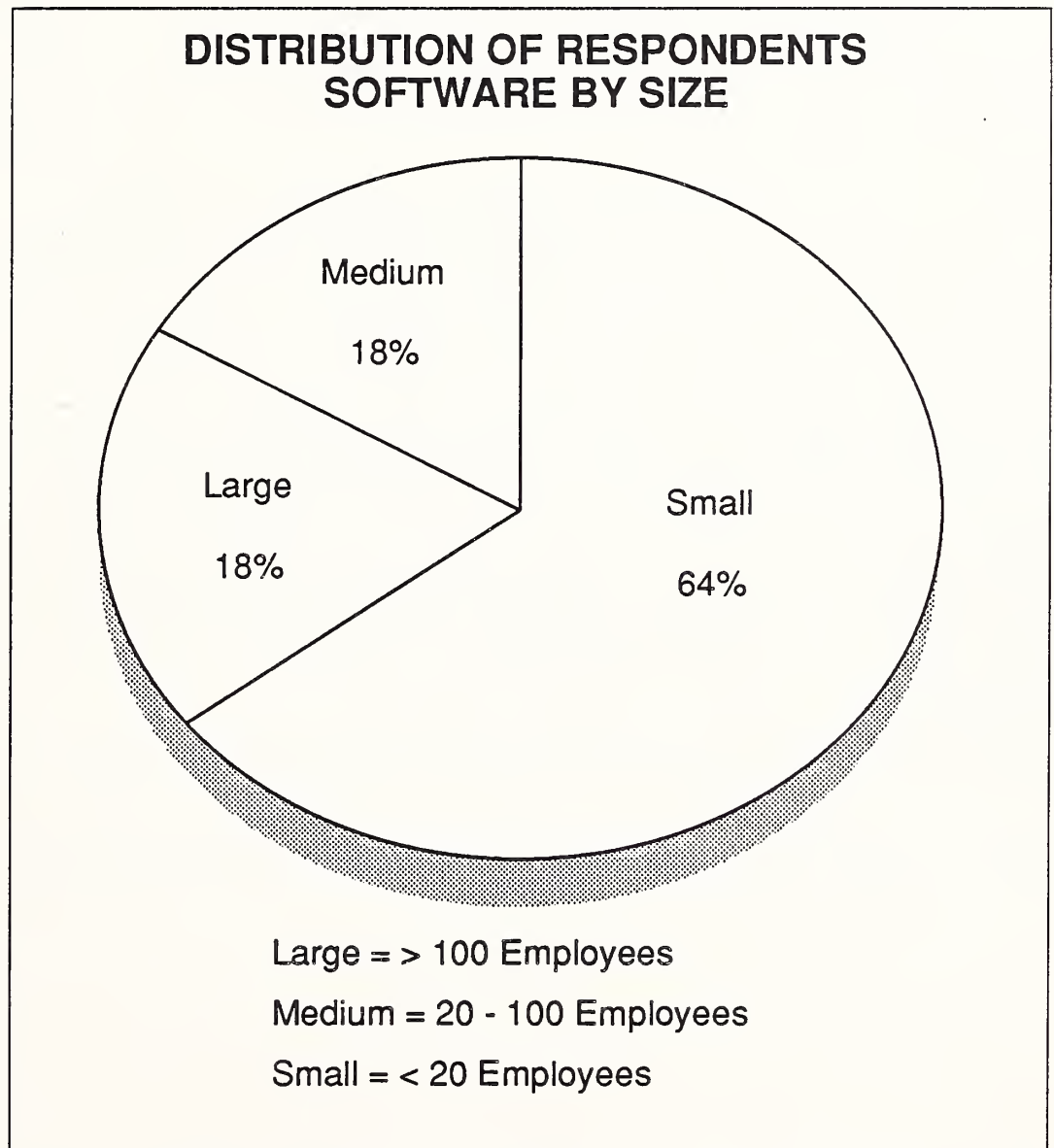


Exhibit I-4 shows the distribution of respondents and depicts both the operating system and the type of hardware employed. The Exhibit also shows which languages were employed.

We were unable to identify customers using ACE-Net. Our interview with Austec management leads us to believe that the installed base of this product is not very broad.

EXHIBIT I-4

### DISTRIBUTION OF RESPONDENTS

BUSINESS GROUP	NUMBER IN GROUP	SIZE			TYPE OF COMPUTER				OPERATING SYSTEM			COBOL	FORTRAN
		S	M	L	PC	WS	MINI	M/F	UNIX	DOS	Other		
Hardware OEM	11	3	6	2	6	4	8	1	10	5	4	11	1
Software Developer	17	3	3	11	14	7	10	6	11	11	3	15	4
Total	28	6	9	13	20	11	18	7	21	16	7	26	5

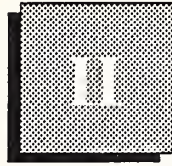




# Executive Overview







## Executive Overview

### A

#### The Company

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- Austec Inc. develops, markets, and supports systems software products, including language compilers and programmer productivity tools. It was founded in 1983 in California, by Austec International Limited (AIL), to manage, market, and support the introduction of AIL's system software products to the U.S. market.
  - AIL is an Australian-based public company that markets computer hardware and develops and distributes systems software products. Austec Inc. is its wholly owned subsidiary.
  - Initially, Austec, Inc. targeted its sales activities to North American computer manufacturers.
- In 1987 Austec acquired Ryan-McFarland, a 20-year-old software firm that specialized in developing language compilers, to complement its line of AIL products and to gain the credibility in United States markets associated with the Ryan-McFarland name.
  - Ryan-McFarland lead its markets with COBOL and FORTRAN compilers for microprocessor-based computers. The company had an installed base of over 200,000 end-user applications that operated using either of these two compilers.
  - Ryan-McFarland products were very successful because they operated on a broad range of computer platforms.
  - Portability was so successful because Ryan-McFarland avoided developing custom compilers for each machine.

- Today all of Ryan-McFarland's operations have been merged into Austec. In addition, the "RM" product identity has been applied to Austec's entire product line, providing the same favorable name recognition for all products.
- Presently the corporate headquarters is located in San Jose, California. The executive officers include a combination of original Australian AIL executives, complemented by executives recruited in the United States.
- Since the merger the two founders of Ryan-McFarland, Don Ryan and David McFarland, have left the company.
- The company does not publish its financial results. However, management indicated that for its 1988 fiscal year it had revenue of somewhat more than \$14 million. This revenue included a major custom compiler project that produced around \$4 million.
- Management does not believe this amount of custom software development revenue can be repeated in future years.

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**B**

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**Products**

- Normally Austec expects to produce 75% of its revenue from product sales and 25% from custom software development.
- 80% of product revenue is derived from sales of COBOL products, the balance from FORTRAN and other product sales.
- The COBOL products include the following:
  - RM/COBOL-74 - the original Ryan-McFarland product.
  - RM/COBOL-85 - a new compiler that complies with the 1985 ANSI standard.
  - RM/MASTER - a compiler and set of integrated productivity tools.
- INPUT believes that most revenue still comes from the first two products.
- Although RM/COBOL-MASTER is described as the strategic product of the future, INPUT does not believe many significant sales have been consummated.



- Austec's FORTRAN offerings include:
  - RM/FORTRAN—the other Ryan-McFarland flagship product.
  - RM-FORTE—a suite of productivity tools for FORTRAN programmers.
- INPUT believes that, even though FORTRAN does not contribute a significant share of company revenues, it is very valuable and well positioned in the market.
- Austec also markets ACENET and RM/Screens. However, INPUT does not believe there have been many sales of these products.
- INPUT learned from interviews with Austec's customers and competitors that Austec's products are aging. We found competition aggressively targeting Austec's weaknesses.
- Austec is committed to complete object code compatibility, across all machines, for its products. Austec pays a high price to achieve this. Major new-product releases can only be produced every three years.
  - INPUT feels this timeframe is a real disadvantage considering the current dynamics of Austec's markets.

## C

### Markets

- Austec targets four markets, with 70% of sales coming equally from Software Developers and Hardware OEMs. The remaining revenue comes from sales to government agencies and large end users.
  - INPUT was unable to verify the 30% of sales to large end users and government agencies because INPUT could not obtain names of accounts or other references.
  - Other INPUT research has shown that selling to end users, including the government, takes a very different marketing approach than selling to organizations that remarket and add value to Austec's products. We saw little evidence that Austec understands the differences.
- Austec has a very impressive list of hardware OEMs as customers. INPUT interviewed representatives from eleven of these computer hardware companies.

- The market for programmer productivity software represents a large opportunity for system software companies. Large end-users and major software developers are looking for ways to improve programmer productivity while lowering the cost of the equipment needed to support this function. Many innovations seem achievable today.
  - 80386 computers have the capability of serving as programmer workstations; these computers provide the power and speed of a mainframe at a fraction of the cost.
  - Industry-standard multiuser operating systems, such as OS/2 and UNIX, make it practical for developers to create productivity tools that have broader marketability because they are independent of any manufacturer's hardware.
  - Vendors of productivity software have identified their niches, and have produced innovative new products.
- Austec is aware of this immense opportunity. However, INPUT believes the company must rethink its strategies to position itself better.
  - The current products have been on the market for some time. The technology is aging and competition is emerging on many fronts.
  - Large end-users and large software developers, like government agencies, will make up the growth segment for programmer productivity software. Unfortunately, Austec is not well positioned in these markets.
  - Customers for programmer productivity software are very sophisticated and demanding. They want to purchase leading-edge products that will remain competitive in the future. These customers also expect responsive customer service.
- Austec is not particularly strong in either of the three areas just mentioned.
- On the other hand, smaller software organizations are attracted to the productivity improvements available from 4GL and Relational Data Base Management products, which Austec doesn't have. So Austec is feeling pressure on all sides.

**D****Competition**

- Today Austec tries to compete in two markets. One is composed of Hardware OEMs and Software Developers that remarket Austec's products. The other is composed of organizations that purchase Austec's products for their own use.
- INPUT found that these two markets have different needs and support different competitors.
- There are two competitors actively targeting the large MIS departments. They are MicroFocus and Realia—two very different companies.
  - Microfocus has a comprehensive line of COBOL programmer tools that operate on mini- and microcomputers. MicroFocus' products provide a full suite of mainframe development tools running on much lower cost hardware platforms.
  - Realia offers a COBOL compiler that is fully compatible with IBM mainframe COBOL, but runs on MS-DOS or OS/2 machines. The compiler achieves speeds that surpass those provided by mainframe compilers.
  - MicroFocus provides a broad range of services in addition to its software products. Realia offers none.
- Three competitors market high-performance compilers. They are Language Processors, Inc. (LPI), MBP, and Philon. Each has unique strategies, but each is targeting to displace Austec from dominance.
  - LPI is a custom compiler company targeting Hardware OEMs needing high-performance compilers. LPI believes it competes well against Austec by providing reduced compile time and improved execution speed.
  - MBP markets a transportable compiler that achieves better performance than does Austec's. MBP also offers its customers a broad range of services. Since it does not charge a runtime license fee, it is very attractive to companies with broadly distributed applications.
  - Philon markets machine-independent language compilers that create an intermediate code, Phi-Code, which operates across many machines. Philon claims significant performance advantages over Austec's compilers.

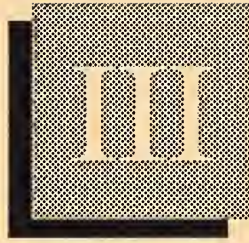
- INPUT is concerned that Austec has not analyzed its competition well enough. As a result, it is not aware of the threat it faces from its competitors.

## E

### General Assessment

- Austec has a very large customer base. However, INPUT found that Austec does not communicate with its customers. This hurts Austec in two ways:
  - Austec does not know why its remarketers are having problems selling its products and what is causing diminishing sales.
  - More importantly, the existing customer base could provide valuable feedback about the products and ideas for enhancing them.
- Although INPUT was unable to assess how severe the problem of aging technology is, customers and competitors clearly stated that Austec (Ryan-McFarland) once had the lead in its market and is losing it.
- Austec's markets are changing, and Austec appears uncertain how to deal with the situation. It is hanging on to some product development and customer service strategies that are no longer viable.
- INPUT believes that Austec can remain an important vendor of compilers and programmer productivity software. However, certain important issues must be addressed.
  - What markets are to be targeted and how best can Austec do it?
  - Which current products offer the greatest potential and what must be done to improve their competitiveness?
  - What can be learned from the competition? Which companies represent the biggest threat?
  - How can Austec regain the acknowledged lead it once possessed?

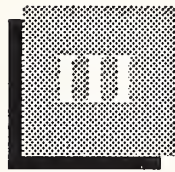




## Profile of Austec







## Overview of Austec

### A

#### The Company

- Austec Inc. develops, markets, and supports systems software products, including language compilers and programmer productivity tools. It is enhancing its product line with new networking products and computer application generators. The company markets its products through distributors/dealers and VARs to the end-user market, on an OEM basis to computer systems manufacturers, and through its own sales force directly to Fortune 1000 companies and government agencies.
  - Austec's parent, Austec International Limited (AIL) is an Australian-based public company that was founded in 1976 to distribute computers and design and sell business application software. In 1983 AIL started specializing in the development and distribution of systems software products.
- Austec Inc. was incorporated in 1983 in California to manage, market, and support the introduction of AIL's systems software products to major computer manufacturers in North America. A second AIL wholly owned subsidiary, Austec Limited, was incorporated in the U.K. in July 1984 to handle marketing activities in Europe.
- In June 1987, Austec acquired Ryan-McFarland Corporation of Rolling Hills Estates (CA). Terms of the cash-stock agreement were not disclosed.
  - Ryan-McFarland was the first company to develop and market a microcomputer-based version of FORTRAN 77, called RM/FORTRAN. This product was also marketed by IBM as PC Professional FORTRAN, a more recent version of which will soon be released as IBM FORTRAN/2 for the IBM PS/2 family of computers.

- Ryan-McFarland was also the first to offer a microcomputer-based version of COBOL, which initially ran on the Z-80. This was marketed under the name RM/COBOL, which complied with the ANSI 74 standard, and has been used in more than 200,000 applications worldwide. Austec was one of the first companies to deliver an ANSI 85 certified microcomputer-based COBOL compiler—RM/COBOL-85.
- The operations of Ryan-McFarland have been merged into Austec. Austec is taking advantage of the strong Ryan-McFarland name recognition by marketing all Austec and Ryan-McFarland products using the “RM” prefix.
- AIL’s European subsidiary, Austec Limited, has been merged with Ryan-McFarland’s European operations.

Austec’s fiscal 1988 revenue, which includes the results of Ryan-McFarland’s operations, is estimated at \$14 to 15 million.

- In fiscal 1987, prior to the acquisition of Ryan-McFarland, Austec’s revenue was approximately \$7.4 million.
- Management anticipates fiscal 1989 revenue will reach \$25 million.

## B

### Management and Staffing

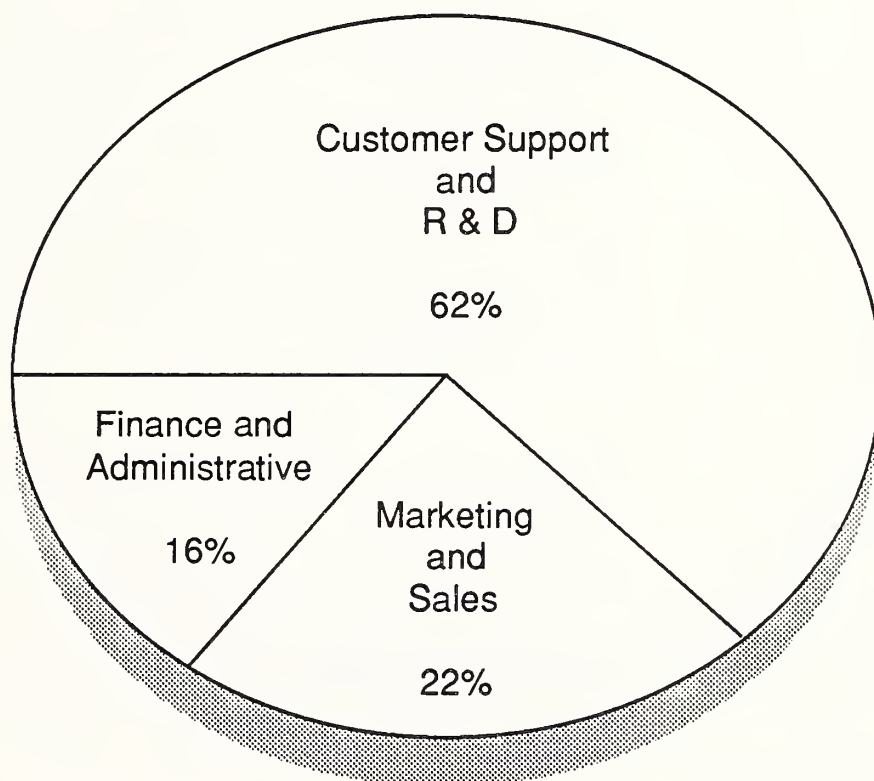
The Austec management team includes the following key executives:

Les McNeill	Chairman and Chief Executive
Tom Pelandini	President
Pat Conroy	SVP International Operations
Paul Davis	SVP Technology
Brian Wadsworth	SVP Marketing
William Ferguson	VP Sales
Tim Chubb	Controller

Austec currently has approximately 125 employees (90 in the U.S., 20 in Europe, and 15 in Australia). Exhibit III-1 shows the breakdown of Austec’s U.S. employment by functional area.

The company is headquartered in San Jose and maintains additional offices in Austin (TX), Boston (MA), Rolling Hills (CA), Melbourne, and London.

## EXHIBIT III-1

**DISTRIBUTION OF AUSTEC EMPLOYEES  
BY FUNCTION  
(U.S. ONLY)**

- San Jose is the corporate headquarters. It is located at 1740 Technology Drive, Suite 300, San Jose, CA 95110, (408) 279-5533. This office also houses sales, marketing, customer service, and COBOL development. Boston is used as a sales office.
- The Rolling Hills offices are maintained for all FORTRAN development activities.
- The Austin offices are for new product research and development.
- The international offices are used for sales, support, and, in some cases, custom development services.



## C

## Key Products and Services

Austec is primarily in the business of designing and marketing minicomputer and microcomputer COBOL application development tools for computer manufacturers and software developers. The company estimates that there are over 200,000 runtime licenses in over 40,000 installations. It also provides mainframe-type FORTRAN compilers and development tools to microcomputer application developers. The company specializes in developing systems software that can be used across multiple hardware and software environments, while keeping the differences between these systems transparent to users. Users of Austec's products can develop application software programs that will execute on any computer system, from microcomputers to mainframes, without any alteration. Austec claims that there is total object code compatibility across all machines.

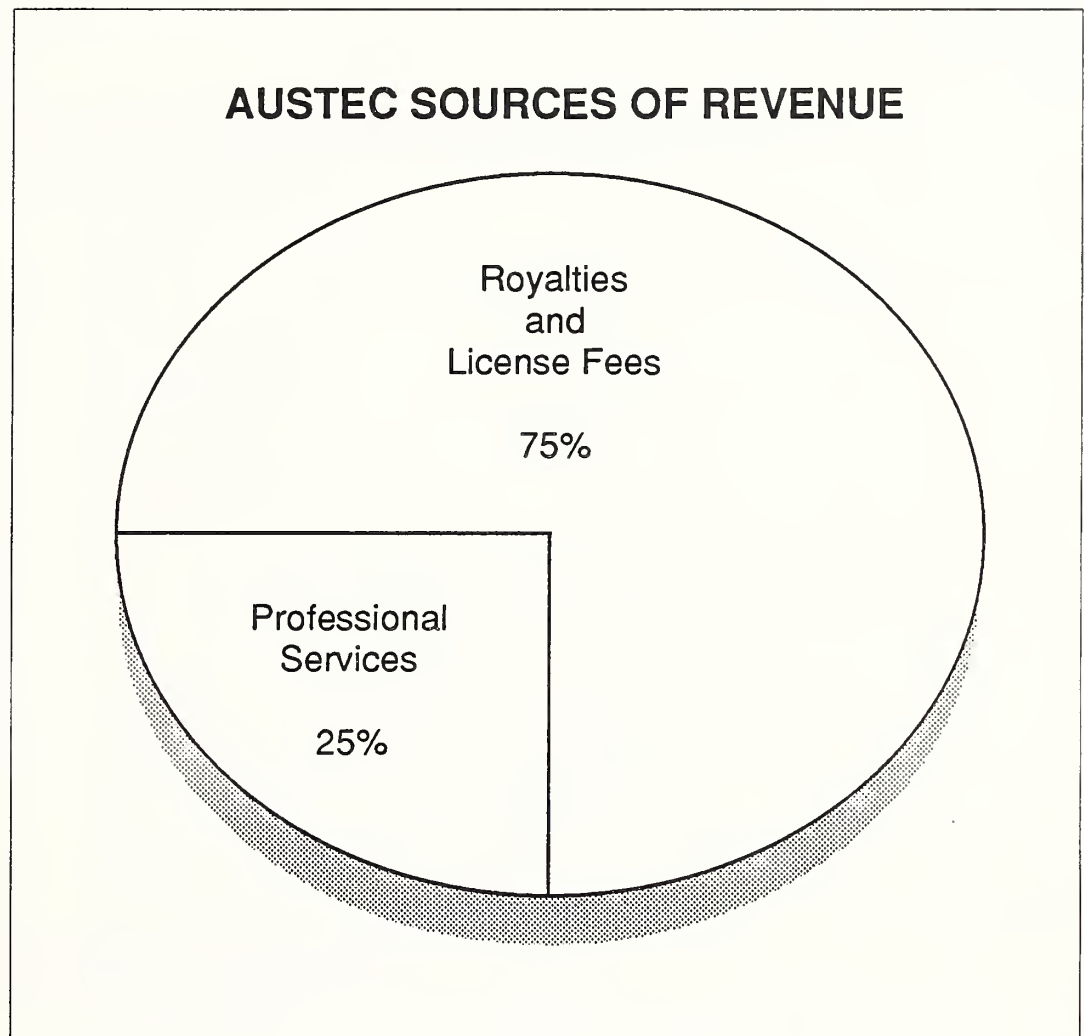
Approximately 50% of Austec's fiscal 1988 revenue was derived from packaged system software sales and associated support services. The other 50% came from a custom Fortran compiler software development contract with a hardware manufacturer. The 1988 revenue mix is not representative of Austec's normal mix. Exhibit III-2 depicts the distribution of sales between software sales and professional services that Austec normally experiences. It shows 75% contribution from product licenses and 25% from professional services.

- Exhibit III-3 shows the distribution of revenue between COBOL and Fortran. Approximately 80% of software revenue is derived from COBOL products and 20% from FORTRAN products.
- Though they are not the major portion of Austec's product line, the company's FORTRAN products represent one of the company's fastest-growing market segments. Austec recently introduced a family of integrated software development productivity tools for its FORTRAN products.

Current Austec products include the following:

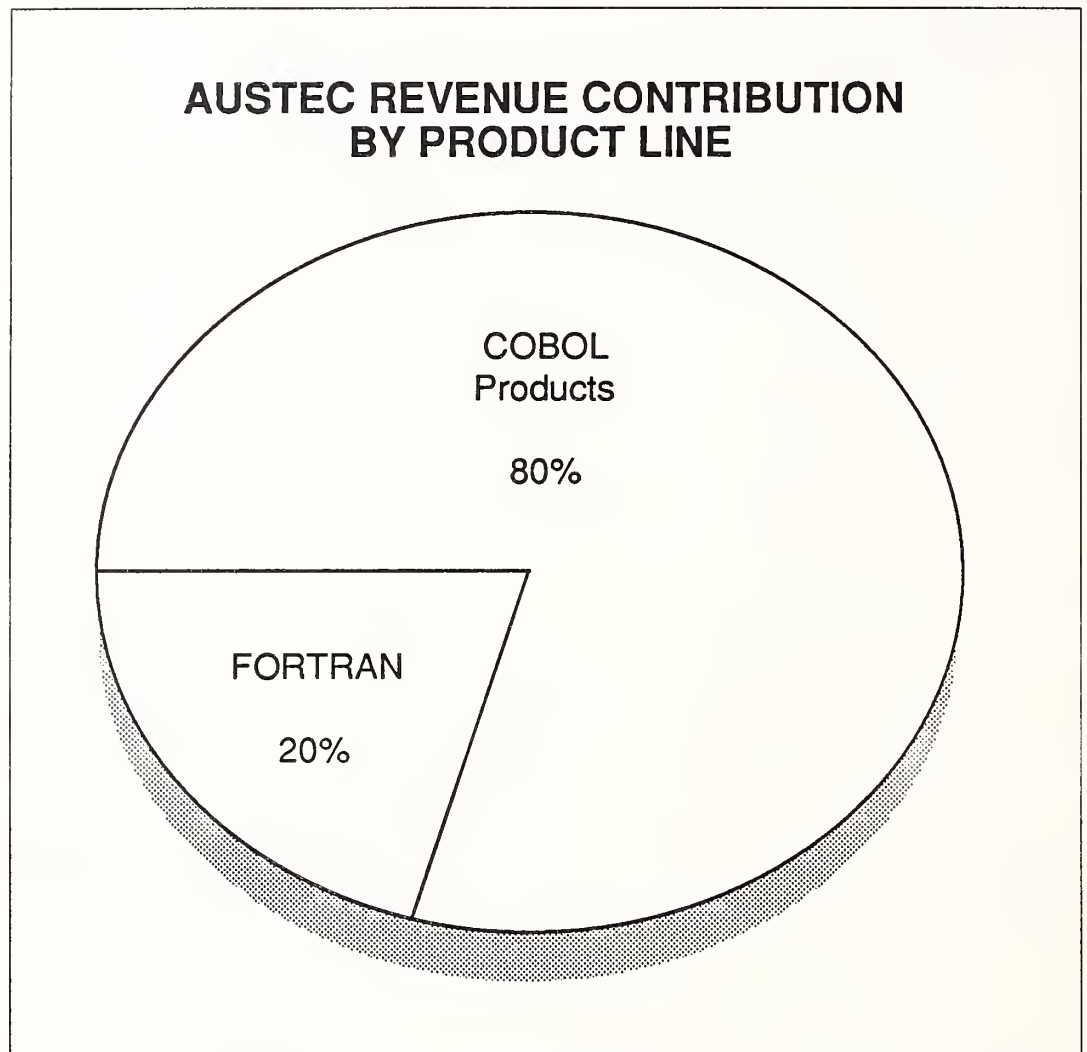
- Language compilers include the following:
  - RM/MASTER COBOL is the first in Austec's MASTER SERIES of language compilers. Each MASTER SERIES compiler includes integrated productivity tools. RM/MASTER COBOL modules include:

## EXHIBIT III-2



- RM/MASTER COBOL Compiler
  - Full-screen text editor
  - Screen painter
  - Report generator
- RM/COBOL-85 and ANSI 85 COBOL.
  - RM/FORTRAN with RM/FORTE, a mainframe level ANSI 77 FORTRAN compiler for microcomputers that includes several productivity tools. This product is also marketed by IBM as PC Professional FORTRAN and will be available as IBM FORTRAN/2 for the IBM PS/2 line of microcomputers.
  - ACENET, an application networking solution, enables applications written in the company's COBOL to run on multiple computers and operating systems transparently, with identical user and data interfaces for each system.

EXHIBIT III-3



- Other products available from Austec include the following:
  - RM/Screens, a COBOL screen generator that works in conjunction with RM/COBOL-85.
  - RM/COS (Commercial Operating System) is an optimized operating system for running applications written in RM/COBOL. (This product is expected to be discontinued in the near future.)
  - Exhibit III-4 shows the major competitors that Austec identified to INPUT. These competitors are broken down by product area.

## EXHIBIT III-4

**AUSTEC COMPETITORS**

PRODUCT LINE	COMPETITOR
Contracted Compiler Development	Greenhills Adapt Soft
PC FORTRAN	Microsoft
Transportable COBOL	Language Processors Inc. MBP Microfocus Philon Realia

**D****Marketing Overview**

Austec claims that its fiscal 1987 revenue was derived from four channels, as shown in Exhibit III-5. The greatest revenue contribution comes from two segments—Software Developers or VARs and Hardware OEMs—with each contributing about 35% of Austec revenue.

Austec products are distributed actively by software companies providing COBOL applications on mini- and microcomputers.

Since there is a massive library of COBOL applications employing various RM-COBOL offerings, computer manufacturers choose to re-market Austec products. Austec's products are licensed through many manufacturers, including the following: AT&T Information Systems, DEC, Encore Computer, Gould Electronics, Honeywell Information Systems, IBM, ICL, Icon Systems & Software, NCR, Olivetti, Pyramid Technologies, Unisys, and Zilog.



## EXHIBIT III-5

**AUSTEC DISTRIBUTION CHANNEL**

DISTRIBUTION CHANNEL	PERCENT OF TOTAL
Software Developers or VARs	35
OEMs/Computer Manufacturers	35
Direct Sales to End Users	15
Government Accounts	15
Total	100

Although Austec claims to have extensive sales directly to Fortune 1000 companies and government agencies, we were unable to obtain names of representative accounts. Therefore, we could not verify this claim.

In June 1987, Tokyo-based Communications Science Co., Ltd. became Austec's exclusive distributor in Japan.

**E****Key Austec Strategies**

During discussions with Austec management, key marketing and product strategies were explained. Several of these are critical to Austec's future success. They also bring notable business risks. These are discussed below, and are further analyzed in subsequent sections of this report.

*Hardware and Operating System Portability*—Austec is committed to maintaining complete object code compatibility across all hardware platforms and operating systems. Presently Austec supports MS-DOS, OS/2, UNIX, XENIX, as well as several proprietary operating systems. Hardware supported includes PCs, Workstations, a broad array of Mini-computers, and Mainframes.



- Advantages:

- A software developer need only create and maintain one library of source code, regardless of how many machines or operating systems are to be supported. This is very valuable for software companies targeting multiple hardware platforms, in that software management costs are significantly reduced.
- Migration to other compiler products can be very costly, so strong ties to the Austec line of compilers are created.

- Disadvantages:

- Runtime speed and performance are compromised, because execution takes place using an executive or pseudointerpreter.
- Austec's development cycle is lengthened dramatically to assure hardware compatibility. At present, the company believes that major product enhancements can only be delivered once every three years. Competitors are releasing major new features every six months.

*Products aimed at "self-teaching" by users using documentation and on-line training tools*—Austec believes that its customer base does not want to acquire training and support services from Austec.

- Advantages:

- Austec does not need to have personnel available to provide training and support services.
- Products must be better documented.

- Disadvantages:

- Austec does not know whether the customer is having difficulty employing its products.
- A potential source of additional revenue is lost.

*Austec believes that the market for compilers and development tools will grow most among small application developers and system integrators.*

- Advantages:

- Austec is particularly well positioned in this segment of the market. It has an extremely large installed base and broad penetration among minicomputer manufacturers.

- Disadvantages

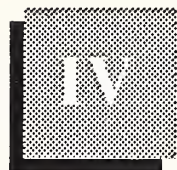
- Should this appraisal of future potential be invalid, Austec risks erosion of future runtime license revenue.



## Market and Competition







## Market and Competition

### A

#### Introduction

As a result of its acquisition of Ryan-McFarland and well-conceived marketing strategies, Austec has gained a unique position in the programming language market. Integration of the product lines from both companies, and use of the “RM” identity for all of them, has led to significant market awareness for a relatively young company. Austec is known as the vendor that:

- Developed and marketed the first COBOL and FORTRAN compilers for mini- and microcomputers.
- Built the largest installed base for both COBOL and FORTRAN products.
- Lead the market with object-code-compatible products across all hardware platforms.

At the time of the acquisition, Ryan-McFarland’s initial COBOL and FORTRAN products were the leaders in the micro-based multiuser market. Ryan-McFarland also marketed a new COBOL-85 compiler and new program development products for both lines.

At the same time, Austec marketed a range of products used by COBOL programmers to speed their application development tasks. These included tools used to build networked applications on a Local-Area Network (LAN). Austec also offered a COBOL compiler.



Austec recognized that the commercial data processing business was changing, and that several changes would be very favorable to future growth. Austec saw that:

- Programmer productivity in large corporations was hampered because mainframe resources were normally allocated to higher-priority on-line production applications rather than software development activities. Unacceptable turnaround times for compiling and testing programs were very common.
- New 32-bit microprocessors were making workstations, PCs, and minicomputers powerful enough to handle tasks traditionally done on mainframes. Lower prices led to investigations of new applications for these computers. In particular, MIS managers were exploring ways to off-load program development activities from the mainframe, and to place them on PCs and minicomputers. They believed programmer productivity could increase and quality would also improve.
- More LANs and other communication networks were used as organizations sought to provide personal data bases on minicomputers closer to the user. These distributed applications required new software development methodologies.
- In spite of the above changes, INPUT has found from surveys of MIS managers that for the foreseeable future COBOL is expected to hold its position as the dominant language in commercial data processing.

In our discussions with Austec management, they indicated that at least 80% of the software license revenue is derived from the COBOL compiler, and related products. Therefore, we have concentrated the majority of our market analysis on this market.

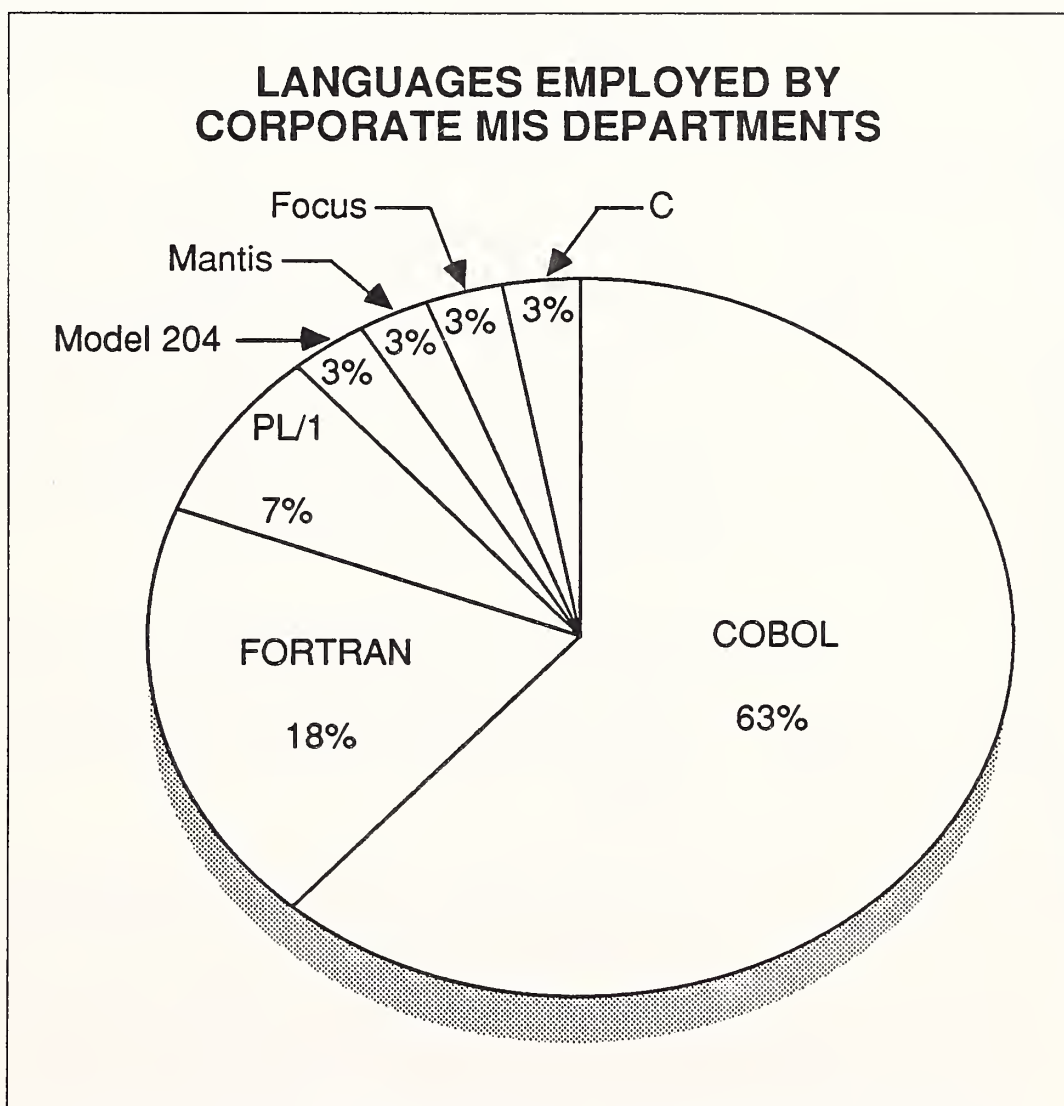
This section provides a brief investigation of the underlying market assumptions that affect Austec's business. There is also a description of Austec's major competitors and their product offerings. At the end, we also include an overview of the market challenges and threats identified during our interviews.

**B****COBOL in  
Commercial Data  
Processing**

COBOL has been used in commercial data processing for more than twenty years, and has become the dominant language for business applications. Even though there have always been people in data processing who believed that COBOL was not likely to become a prevailing language, its use continues to increase. There is no sign of this changing.

Exhibit IV-1 displays the distribution among programming languages within corporate MIS organizations. Applications written in COBOL make up 63% of those applications.

EXHIBIT IV-1



In the late 1970s and early 1980s minicomputers were introduced and installed extensively in small- and medium-sized businesses. These minicomputers supported traditional business and accounting applications. COBOL became the leading language for these computers because most commercial application programmers were proficient in COBOL.

Now there are vast libraries of COBOL business applications. These applications can be used on many machines from different vendors, as long as the COBOL compilers are compatible.

This massive investment in COBOL applications, as well as the availability of thousands of skilled COBOL programmers, makes any movement away from COBOL a process that will take many years.

## C

### Importance of UNIX

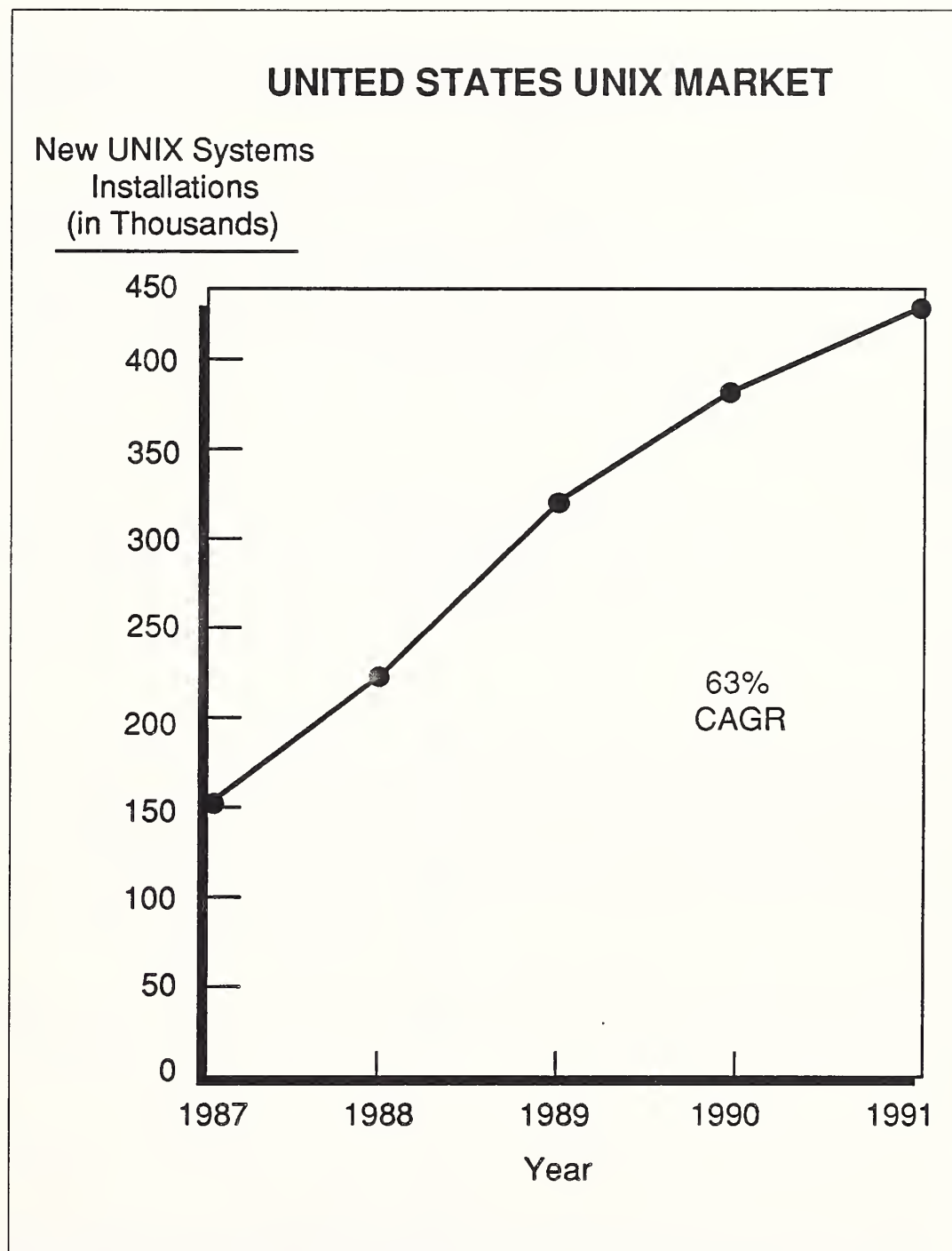
Historically, every computer vendor developed and marketed proprietary operating systems that ran only on the vendor's own hardware. This made it very difficult for customers to move applications from one vendor's hardware to another's. It also forced customers to make major commitments to whichever computer supplier they chose.

In large commercial installations IBM took the lead with its hardware and operating systems. This made it very difficult for other vendors to penetrate IBM-dominated accounts.

With the arrival and broad acceptance of Personal Computers, the first industry standard operating system emerged—MS-DOS. This operating system runs on computers from a very broad range of computer manufacturers. Applications are readily transportable from one vendor's PCs to another's.

In the same way that MS-DOS became the operating system for personal computers, UNIX is expected to be the operating system for multiuser mini- and microcomputers. Exhibit IV-2 shows INPUT's forecast of UNIX system installations for the period from 1987 through 1991. We expect that the number of new systems installed will grow from 150,000 in 1987 to 450,000 in 1991. This represents a compounded annual growth rate of over 63%.

EXHIBIT IV-2

**D****Multiuser 80X86  
Installations**

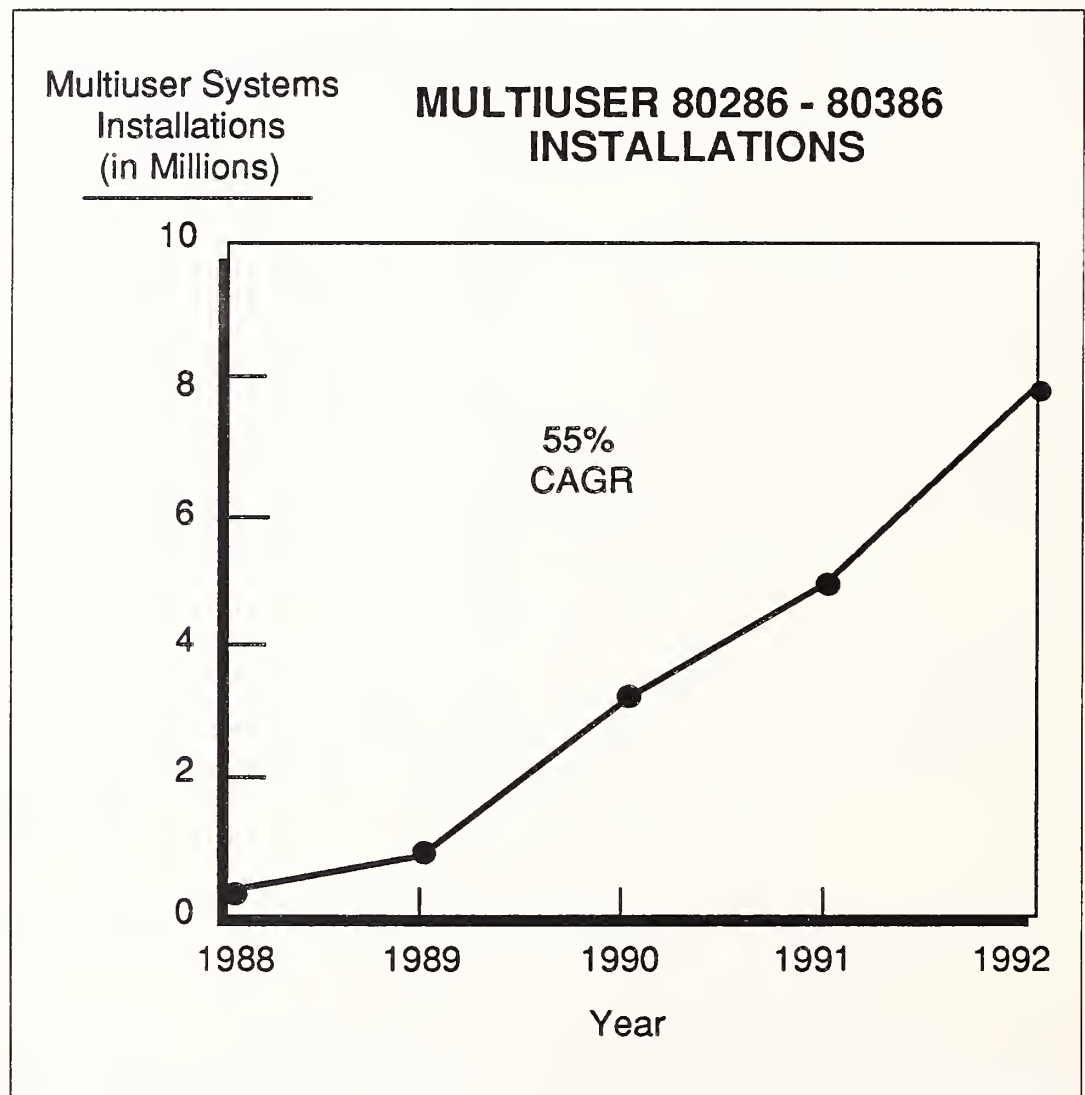
INTEL's 80286 and 80386 microprocessors make available powerful multiuser computers for around \$10,000 that have the functionality of \$100,000 minicomputers of just a few years ago. This significant price performance improvement makes feasible applications that were prohibitively expensive just a few years ago.



These computers need to have a powerful multiuser operating system to replace MS-DOS. This operating system will either be OS/2 or a version of UNIX.

Regardless of which operating system prevails, INPUT believes that by 1992 there will be 13 million 80X86 machines in use as multiuser systems. Exhibit IV-3 shows our forecast of multiuser systems installations for the period from 1988 to 1992. This market will experience a growth rate exceeding 55%.

EXHIBIT IV-3





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**E****Programmer  
Productivity**

Programmer productivity is one of the greatest concerns facing MIS executives in the United States. With budgets under pressure, and the backlog of software development work increasing, the only apparent solution is to increase the productivity of the existing programming staff.

Software to help programmers produce effective COBOL programs faster and better is generally available on mainframes. Unfortunately, these productivity products require more mainframe computer resources than required to support traditional development methods. This comes at a time when budgets can't support acquisition of additional mainframe capacity.

MIS departments are now turning to minicomputers or microcomputers to take over many tasks that had required mainframes. For example, it is now possible to provide a complete COBOL development environment on one of these machines.

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**F****COBOL Productivity  
Software**

The market for productivity software using mini- and microcomputers is still in its infancy. Therefore, there are wide differences in capabilities among the products being offered. However, it is clear that if a vendor wants to achieve a significant share of the market it must offer more than an industry-standard compiler.

Our study indicates that mainframe shops require most of the capabilities identified in Exhibit IV-4 to support their COBOL programmers as they develop new applications.

INPUT has found that most major MIS organizations are prepared to accept less than all the functions identified in Exhibit IV-4 when they acquire these products. However, the vendor's long-term product evolution strategy must fit with the corporation's MIS strategy to employ new programmer productivity technologies.

## EXHIBIT IV-4

**FEATURES OF COBOL PRODUCTIVITY TOOLS**

- High-Speed ANSI 85 COBOL Compiler
- Interactive Debugging Tools
- Data Code Support between EBCDIC and ASCII
- A Suite of Testing Tools
- Source Library Facilities
- Logic Flow Analysis and Charting
- Simple Interfaces to Current CASE Products

**G****Vendors of  
Nonmainframe  
COBOL Products**

Austec targets its marketing to:

- Organizations using multiuser computers, but not mainframes.
- Nonproprietary operating systems like UNIX, XENIX, and OS/2
- Off-load software development tasks from mainframes.

INPUT has identified 5 organizations that are Austec's major competitors. They are Language Processors, Inc.; MBP; MicroFocus; Philon; and Realia. Exhibit IV-5 provides information about each of these vendors. Although we intend to briefly review each company below, some highlights are:

- Three companies are affiliated with international parents. They are Austec, MBP, and MicroFocus. These three are also the largest in terms of revenue.

## EXHIBIT IV-5

**MAJOR VENDORS OF PORTABLE COBOL PRODUCTS**

COMPANY/ HEAD- QUARTERS	WORLDWIDE NUMBER OF EMPLOYEES	REVENUE (Est.) (\$ Millions)	LICENSE REVENUE (Percent)	OTHER REVENUE SOURCES	SALES OFFICES
Austec Inc. San Jose, CA	125	14	80	Custom Compilers	3
Language Processors Inc. Waltham, MA	50	-	85	Custom Projects	2
MBP Alameda, CA	560	40	80	Training, Upgrades, and Enhancements	1
Microfocus Palo Alto, CA	274	28	48	Training and Implementation Services	2
Philon New York, NY	25	<5	80	Training, Maintenance Customer Support	1
Realia Chicago, IL	26	<5	100	None	1

- The revenue of the three smallest firms is probably insufficient to achieve long-term profitability while also responding to the demands of a rapidly changing market.
- Only MicroFocus obtains a significant amount of revenue from sources other than license revenue.

- In all case the sales force is centralized in three or fewer sales offices.

We did identify Microsoft as a supplier in this market, but we do not consider it to be a key competitor for Austec. Microsoft has the largest installed base of COBOL and FORTRAN compilers, but its products are considered “commodity” compilers, which lack the necessary features and functionality demanded by Austec’s customers.

Following this section is a synopsis of the capabilities of each company and highlights of their product strategies. Exhibit IV-6 profiles key information about each company’s COBOL products.

### **1. Language Processors, Inc (LPI)**

LPI specializes in developing high-performance “true” compilers that directly generate object code in executable form. They choose to compete on a performance basis with companies marketing interpreters, or pseudo interpreters.

LPI develops its products for a full range of computers from 80386 micros to minicomputers. These products have all the functions of main-frame languages.

The products run on UNIX, XENIX, MS-DOS, and OS/2

LPI offers COBOL, FORTRAN, and Basic compilers.

There are currently 1500 installations. The company has been experiencing 15% quarter-to-quarter revenue growth.

### **2. MBP Software and System Technology**

MBP is the U.S. subsidiary of a West German Software company, which has been marketing its COBOL product for seven years.

MBP supports UNIX and MS-DOS running on INTEL 80X86 (80186, 80286, 80386), Motorola 680X0 (68010, 68020, 68030...), and IBM RISC microprocessors. All minis and microcomputers using these families of chips can run MBP compilers.

Novell NetWare and IBM’s PC Network are also supported by MBP.

There are over 15,000 installations of the MBP COBOL compiler.



## EXHIBIT IV-6

**COBOL PRODUCT PROFILE**

COMPANY	PRODUCT NAME	OPERATING SYSTEM	YEARS ON MARKET	VENDOR'S OWN VIEW OF PRODUCT STRENGTHS
Austec	RM-COBOL 85	UNIX XENIX DOS-OS/2 Others	2	Compatibility with RM-COBOL Reliability Quality
Language Processors Inc.	LPI COBOL	UNIX XENIX DOS	6	True Compiler Portability—Standard Components
MBP	COBOL	UNIX DOS Netware	7	Execution Speed Conforms to ANSI Standard Screen Management System
Microfocus	Microfocus COBOL/2	UNIX XENIX DOS-OS/2 Others	3	Mainframe Programming Environment Productivity Performance
Philon	Philon Fast COBOL	UNIX XENIX	5	Compiler Speed Portability Compliance with Standards
Realia	Realia COBOL	DOS	3	Speed of Execution Mainframe Conformance Price



Licenses provide for a one-time fee, with no runtime license fee, regardless of how many subsequent installations are made.

MBP claims to attain exceptional runtime performance.

MBP also offers a broad array of services as bundled elements of the initial license fee.

### **3. MicroFocus**

MicroFocus is the US sales and support organization for a U.K.-based parent.

In addition to its highly regarded compiler, MicroFocus appears to have the broadest array of programmer productivity products.

MicroFocus is well established in large end-user mainframe installations, particularly insurance companies, banks, and financial institutions.

The revenue mix is different from that of any competitor. MicroFocus believes that customers need training and support to effectively use the products. It has also found that customers are willing to pay for these services.

MicroFocus explained that it releases new products twice a year. The company is also willing to do custom development for large end users.

In our interview, management described a clear business strategy.

### **4. Philon**

Philon markets high-performance object-code-compatible compilers. Therefore, object code developed on one machine will run on any other machine. All source statements are translated into a common language, called PHI Code.

Compilers are offered for COBOL, FORTRAN, and BASIC.

Philon claims to support all RM/COBOL extensions.

Products are targeted for the Motorola 680X0

Enhancements are provided for file and record locking.

Although Philon's array of programmer development tools beyond the compiler is currently not very broad, the compiler offers "semantic" edits for language usage.

## 5. Realia

Realia only offers an MS-DOS-based compiler, but claims full mainframe functionality on a PC.

Realia claims to be able to compile a 10,000-line program in 76 seconds.

The products are sold as a package, with one year of bundled maintenance included in the license fee. No other services are available from Realia.

Realia believes that it is second only to MicroFocus in sales to large-end-user installations.

25% of annual revenues come from independent software companies. However, these companies are developers using MS-DOS, not UNIX.

## H

### Distribution Channels

Each company we studied offers COBOL products to software developers. However, these companies have developed very different marketing and distribution strategies.

In our interviews with Austec and its five competitors we tried to determine the importance, in terms of revenue contribution, of each of the following six groups of customers.

- Independent Software Companies—organizations that develop and market application software. These companies do not sell hardware.
- Hardware OEMs (Original Equipment Manufacturers)—companies that build hardware and market compilers and languages with their equipment.
- Value-Added Remarketers—companies that add value to purchased computer hardware by developing software applications. These applications are bundled with the hardware when resold to a customer.
- End-Users—large corporations that acquire program development products to serve their internal software development needs.

- Government Agencies—agencies of the U.S government.
- Retail Channels—includes all types of customers targeting retail sales.

Exhibit IV-7 shows the results of our survey.

EXHIBIT IV-7

### SEGMENTATION OF CUSTOMER BASE

VENDOR	INDEPENDENT SOFTWARE COMPANY	HARDWARE OEM	VALUE- ADDED REMARKETER	END USERS	GOVERN- MENT	RETAIL
Austec	35	35	-	15	15	-
Language Processors Inc.	-	70	-	10	10	10
MBP	50	10	5	30	5	-
Microfocus	-	50	-	50	-	-
Philon	20	80	-	-	-	-
Realia	25	-	25	20	-	30

Austec indicated that both Independent Software Companies and Hardware OEMs were responsible for about 35% of Austec's revenue. End users and government agencies reportedly contributed equally to the other 30%.

- In interviews we were not able to identify the names of any major end user or government agency customers.
- Furthermore, using INPUT sources, we attempted to identify government agencies that used, or were familiar with, Austec's or Ryan-McFarland's products. Numerous telephone calls failed to locate a single reference within the government.

We caution the reader that the information in Exhibit IV-7 was provided by each vendor and may be unreliable because we were unable to verify it.

INPUT believes that success in marketing to the end-user market will be very important to any company wishing to be a major player in the growing market for mainframe programmer productivity.

## I

### Evaluation of Products

In the process of surveying Austec customers and competitors we attempted to ascertain which factors were most important to customers when they contemplate purchases of software development tools. We asked them to rate the following factors:

- Quality of Management—How important is the quality of the vendor's management team to the selection process?
- Product Line Breadth—Is it important for the vendor to have a range of products beyond those being purchased?
- Meeting Commitments—Do they attempt to ascertain from other customers how well the vendor followed through on its commitments?
- Technology Leadership—Are they interested in the vendor's overall technological strength, or more interested in the particular product?
- Marketing Capability—How important is the apparent marketing capability of the vendor?
- Product Value—How important is the relationship of the value of the product to the price?

Respondents were asked to rate each of these factors on a scale from 1 to 5 where 5 was considered the highest rating.



INPUT has found that in this type of survey responses normally cluster around 3. Therefore, only those below 3.0 and above 4.0 prove to be significant.

The results of the survey of Austec's competitors is shown on Exhibit IV-8. Meeting Commitments and Technology Leadership were rated at 4.5 and 4.0 respectively. We believe that this is important to note as additional survey results are presented later in this study.

EXHIBIT IV-8

### CRITERIA FOR VENDOR SELECTION (Survey of Vendors)

Importance  
Rating

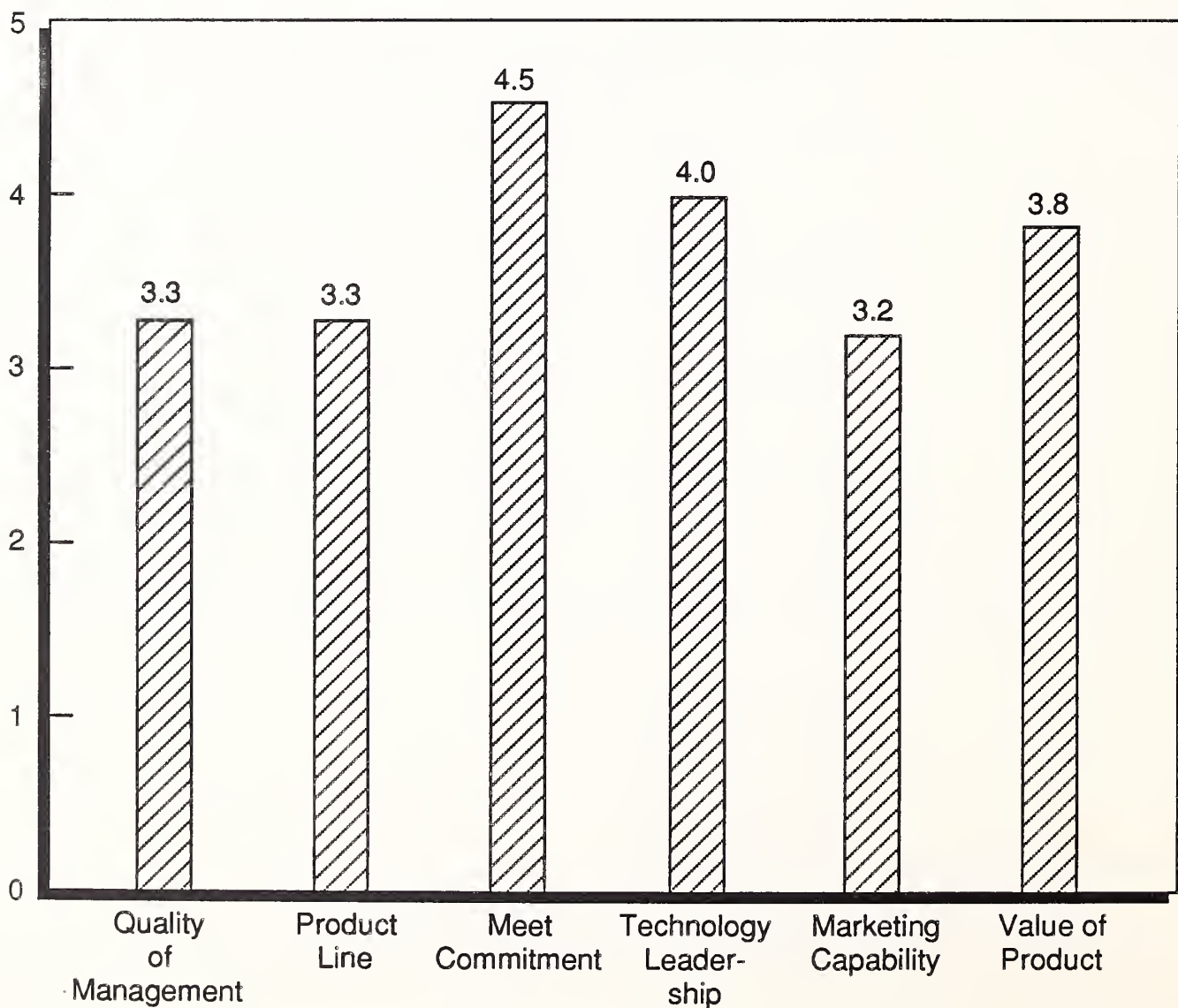
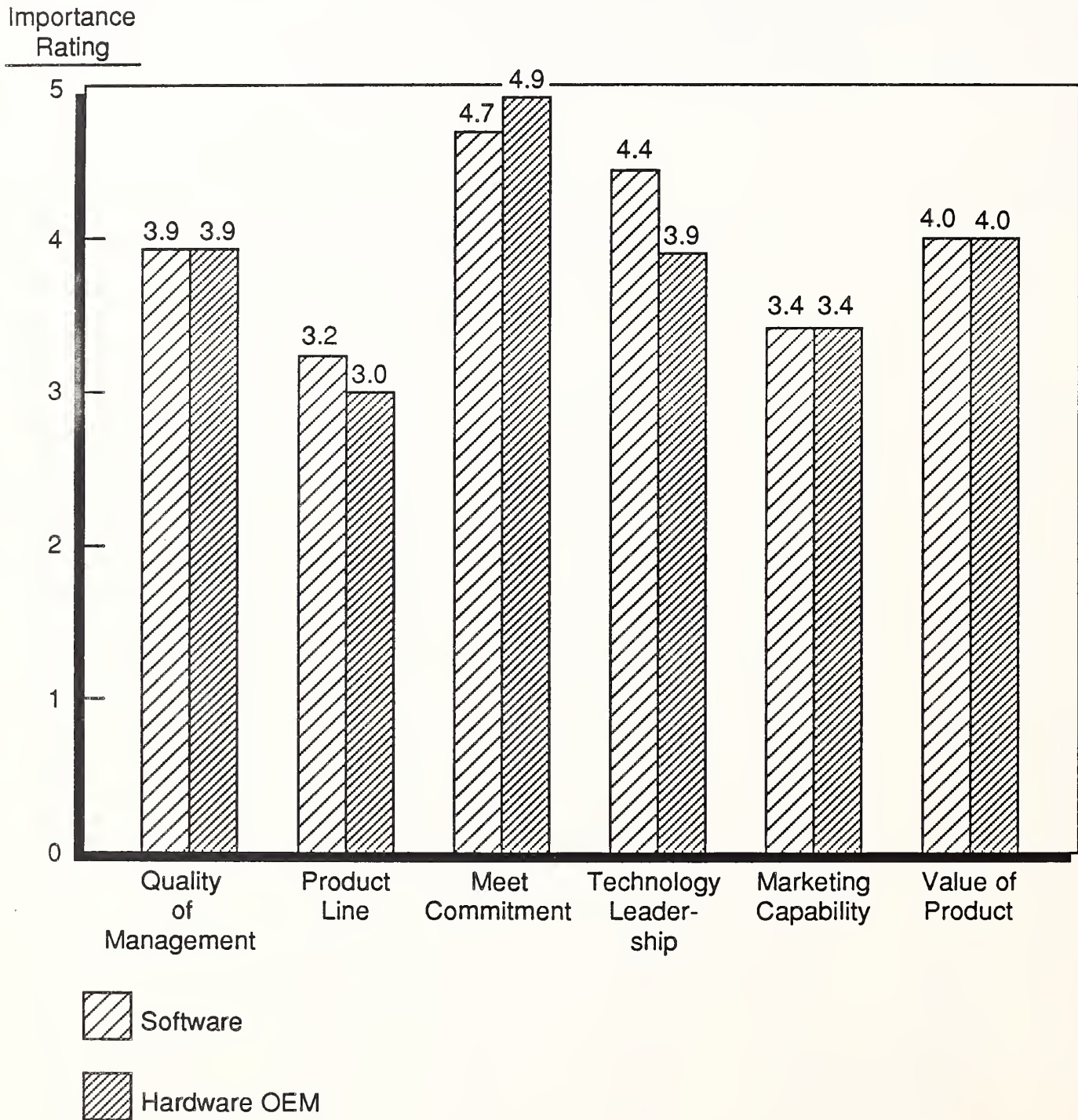




Exhibit IV-9 shows how Austec's customers responded to the same questions. In this case there is one set of graphs for hardware OEMs and a second showing the opinions of the balance of the customers surveyed. Meeting Commitments received a rating of 4.8 by the hardware OEMs and 4.7 by the rest of the customers. Technology Leadership proved to be more important to software developers than to hardware companies. Both groups felt that the price-to-value assessment, shown in the Product Value rating, was very important.

EXHIBIT IV-9

### CRITERIA FOR VENDOR SELECTION (Survey of Austec Customers)



**J****Importance of COBOL in the Future**

We believe that COBOL will be a very important programming language for the data processing industry for some time to come. However, we were interested in determining whether all parties surveyed agreed with our opinion. Exhibit IV-10 shows the results of our survey.

EXHIBIT IV-10

**ESTIMATED FUTURE IMPORTANCE  
OF COBOL PRODUCTS**

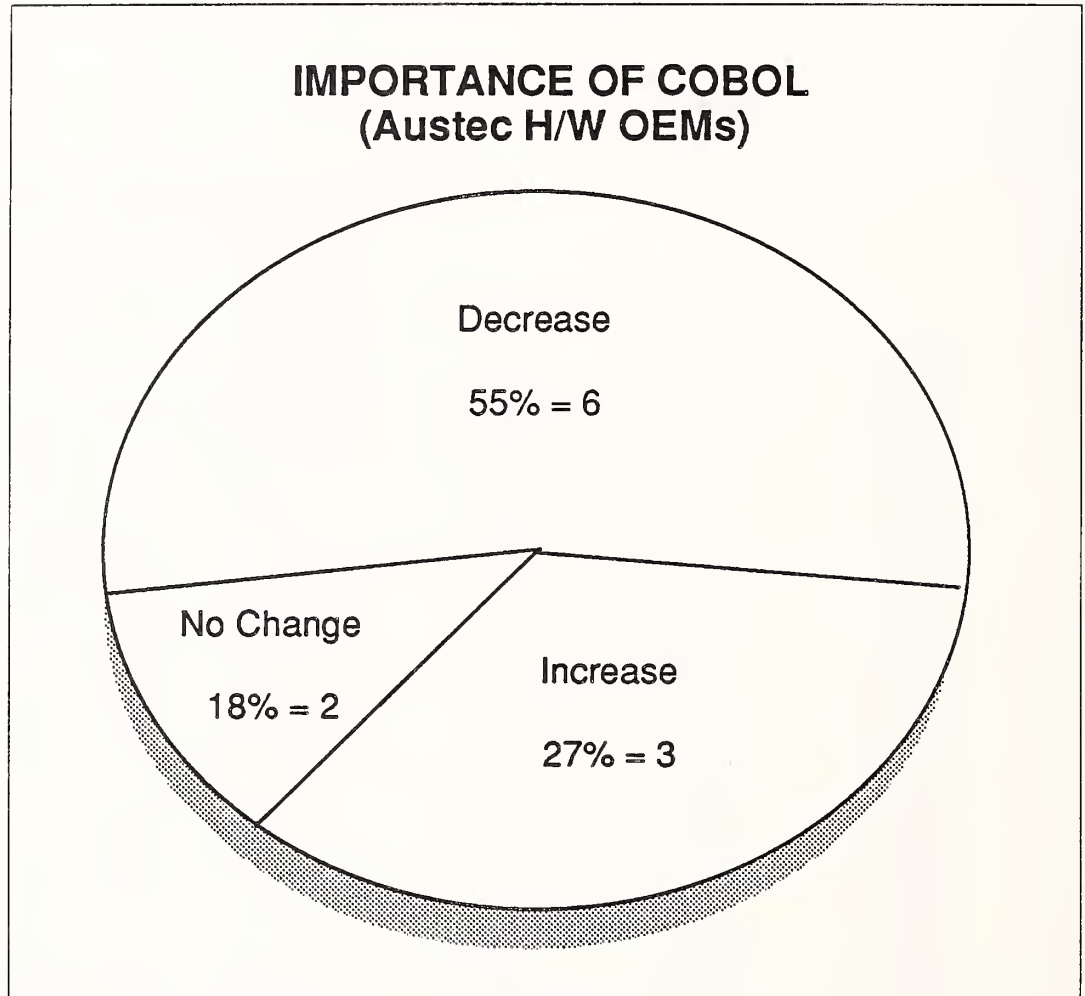
RESPONDENT	NUMBER IN SAMPLE	INCREASE	DECREASE	REMAIN SAME
Vendor of COBOL Products	6	6	0	0
Hardware OEM	11	3	6	2
Software Developer	17	5	10	2
Total	34	14	16	4

Each of the COBOL product vendors believed that the market would grow. Their reasons were much the same as those we presented earlier in this section of the report.

The opinions of Austec's customers differed dramatically from those of the vendors. INPUT believes that the vendors ought to take note of the customer's views. Market target will play a key factor for the vendor's future success.

Only 27% of the Hardware OEMs felt that COBOL would increase in importance, while 55% felt it would decrease. The rest felt that it would not change. These results are shown in Exhibit IV-11.

EXHIBIT IV-11

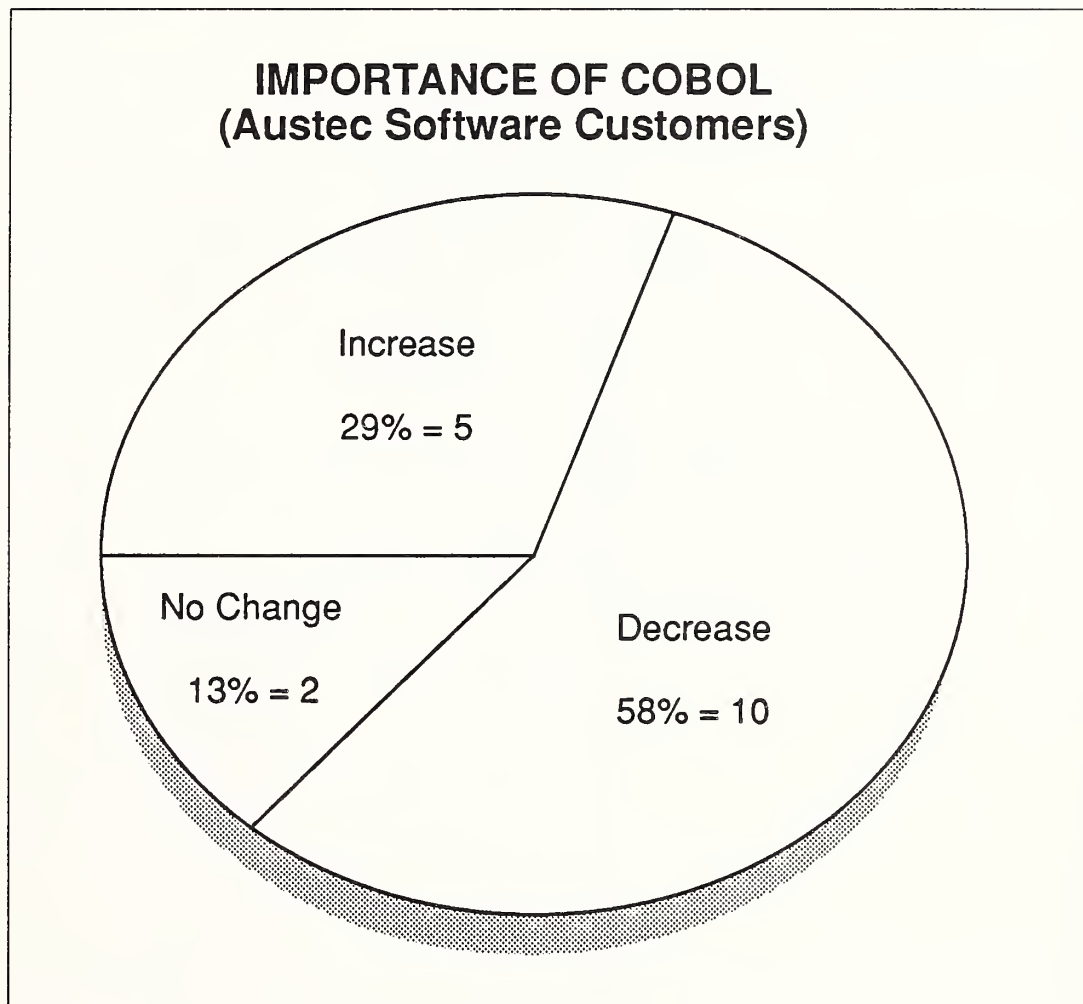


- The most common reasons given for the decreasing importance of COBOL were:
  - 4GLs will impact the COBOL world most
  - People are moving to distributed data base applications.
  - The reasons for increasing markets were:
    - New COBOL compilers are more efficient and faster

INPUT believes these assessments are very consistent with other studies we have performed.

Of Austec's software development customers, 58% believed that COBOL would decrease in importance, while 29% expected it to increase. These survey results are shown in Exhibit IV-12.

EXHIBIT IV-12



- The most common reasons given for the decreasing importance of COBOL were:
  - 4GLs will replace COBOL for many applications
  - COBOL compilers are slow and will be replaced by faster compilers.
  - It is not the language of the future; the industry is moving toward languages that are easier to use.
- The reasons for increasing markets were:
  - New COBOL compilers offer more speed
  - New "Dialects" of COBOL are better.



## K

## Future Challenges for Vendors

We questioned each of Austec's COBOL competitors about the key challenges they anticipated having to deal with in the next three years. Their responses are summarized in Exhibit IV-13. They are listed in the order of frequency.

EXHIBIT IV-13

### CHALLENGES CONFRONTING VENDORS OF COBOL APPLICATION DEVELOPMENT SOFTWARE

RANK	FREQUENCY CITED	CHALLENGE
1	5	Competition from Fourth-Generation Languages and New Software Development Products
2	4	Conformance with Mainframe Capabilities on Micro or Mini
3	3	Networking and Connectivity
4	3	Having Marketplace Understand Capabilities of New COBOL Tools
5	2	Communication with Customer Base
6	2	Providing SQL and DB2 Capabilities
7	1	Managing Resources in Rapidly Growing Market

We believe that the issues identified in Exhibit IV-13 are not only correct, but in the right order. We also believe that any successful vendor must have clear plans to address them.

---

**L****Impact of CASE on the COBOL Market**

Computer-Aided Software Engineering (CASE) is the most-talked-about technology in the application software industry today. In our survey of Austec competitors, we asked the vendors to give their views about CASE products and the level of concern they have about potential competition.

None expressed fear that they would be hurt by CASE. However, each company had very different views about its impact.

It is significant to note that nobody believes there will be one vendor of all CASE products. Solutions will evolve through innovations by new vendors and through alliances with existing vendors, including language companies.

Several vendors perceived a big opportunity for COBOL vendors to form alliances with companies developing "Code Generation" products.

None of the companies was willing to discuss any of the details of their partnering strategies.



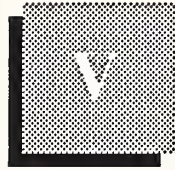


# Evaluation of Austec and Its Products









## Evaluation of Austec and Its Products

### A

#### Introduction

INPUT's process of data gathering involved a combination of telephone interviews and personal interviews at the respondent's place of business. INPUT completed interviews with 28 companies, which involved 17 software developers and 11 hardware OEMs.

Very valuable additional information was gathered by conducting interviews with Austec's competitors. Of particular interest are the market and support issues described by these companies.

A careful analysis of the aggregated responses to all questions revealed there was significant consistency among the responses within each group surveyed. This reinforces our confidence that the sample size was adequate and the sampling technique was valid.

INPUT found that most of the software developers interviewed were relatively small. They probably contribute less revenue to Austec than the hardware OEMs, which remarket Austec's products to their computer customers—a point to consider when there are differences in the responses from the two groups of customers.

In the balance of Section V we present the results of the customer survey. We also provide information from our competitive survey when it clarifies or reinforces a conclusion drawn from the customer survey.

### B

#### Awareness of Austec's Products

INPUT believes that Austec gained an important asset by acquiring the Ryan-McFarland name. We tried to determine the extent to which Austec gained visibility for itself and its products by capitalizing on this name recognition and by applying the "RM" identity to all products. Exhibit V-1 shows how many of Austec's products are used or marketed by the customers we interviewed.

## EXHIBIT V-1

**AUSTEC PRODUCT DISTRIBUTION**

NAME	NUMBER USING	AVERAGE YEARS	FAMILIAR
RM/COBOL-74	19	6	17
RM/COBOL-85	14	2	23
Austec COBOL	4	2	7
COBOL Master	2	1	8
ACE-NET	2	1	8
Screens	3	1	10
COS	2	0	5
FORTTRAN	5	4	10

Of 27 companies interviewed, most used the RM-Cobol or the Ryan-McFarland Fortran products.

Since Austec's future success will depend on other, newer products like Cobol Master and ACE-Net, we wanted to determine how well these other products are known by current customers. Unfortunately, less than a third of Austec's current customers were at all familiar with these new products.

In many cases customers are far more familiar with Ryan-McFarland than Austec. In spite of these responses, many believed that the merger was good for them, but saw no tangible evidence.

Our inquiries into issues of product awareness uncovered the fact that in most cases Austec does not maintain ongoing contact with the existing customer base. Austec appears to be missing an important avenue for new sales. Many companies find that their best customers for future products are in the current customer base.

Austec executives claim to be aware of the opportunity to exploit the current customer base for additional business, but there is little evidence of this from the customers.

## C

## Reasons for Choosing Austec

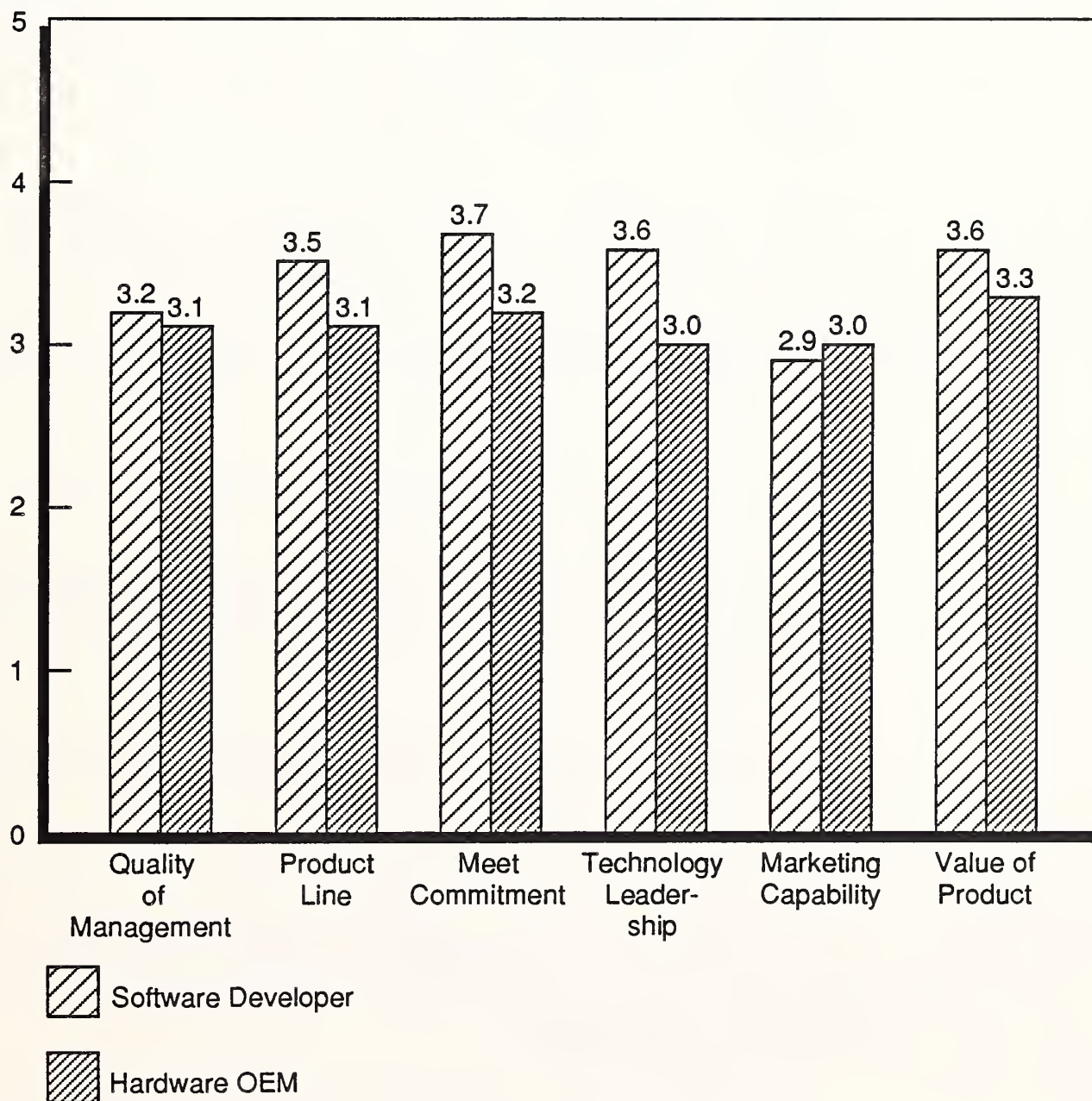
On Exhibit IV-9 we presented the factors that both Austec and its competitors felt were important to customers in selecting a vendor of software products. Both Austec and the competitors felt that Technology Leadership and Meeting Commitments were most important to their customers.

When the same questions were asked of the customers, we found that these same issues did not appear to be important to them; as a matter of fact, no single factor was identified as very important. Exhibit V-2 displays the results of these questions.

EXHIBIT V-2

## CRITERIA FOR SELECTING AUSTEC

Importance Rating





Most of the responses fell into the range of 3.0 to 4.0, which we consider of little significance.

Upon further analysis, INPUT believes that most of the people being questioned were probably not involved in the original selection of Austec, so they hadn't given much thought to how they would make the choice. We came to this conclusion because:

- Most customers interviewed had made their decisions to buy Austec's products prior to the merger of Austec and Ryan-McFarland.
- The product managers we interviewed often had only recently assumed responsibility for Austec products.

## D

### Austec's Importance as a Vendor

Virtually every customer, as well as all the competitors, stated that Austec (Ryan-McFarland) had previously held a very significant leadership position in the market. Only half the customers and none of the competitors believe Austec still holds that lead. The reasons given for why this lead was lost fall into three general areas.

- Austec has made few enhancements to products and fundamental technology. Therefore innovative competitors have surpassed the company in terms of both performance and functionality.
- Incompatibility problems between COBOL-74 and COBOL-85 forced many customers to look elsewhere when they wanted to upgrade their compilers.
- Austec's library of software development tools does not compare favorably with those offered by competitors.

When we asked whether the customers had evaluated competitive products, all of them said yes. We also learned that 13 of 27 customers marketed products from a competitor. Eight customers marketed the MicroFocus COBOL products.

The reply to the question "Is Austec an important vendor to your company?" was very enlightening. Exhibit V-3 shows the responses to this question.

It is noteworthy that only half the hardware OEMs gave a positive reply.

Most hardware OEMs are already marketing MicroFocus products, in addition to those from Austec. Exhibit V-4 depicts graphically that 48% of Austec's customers already market a competitive product.

EXHIBIT V-3

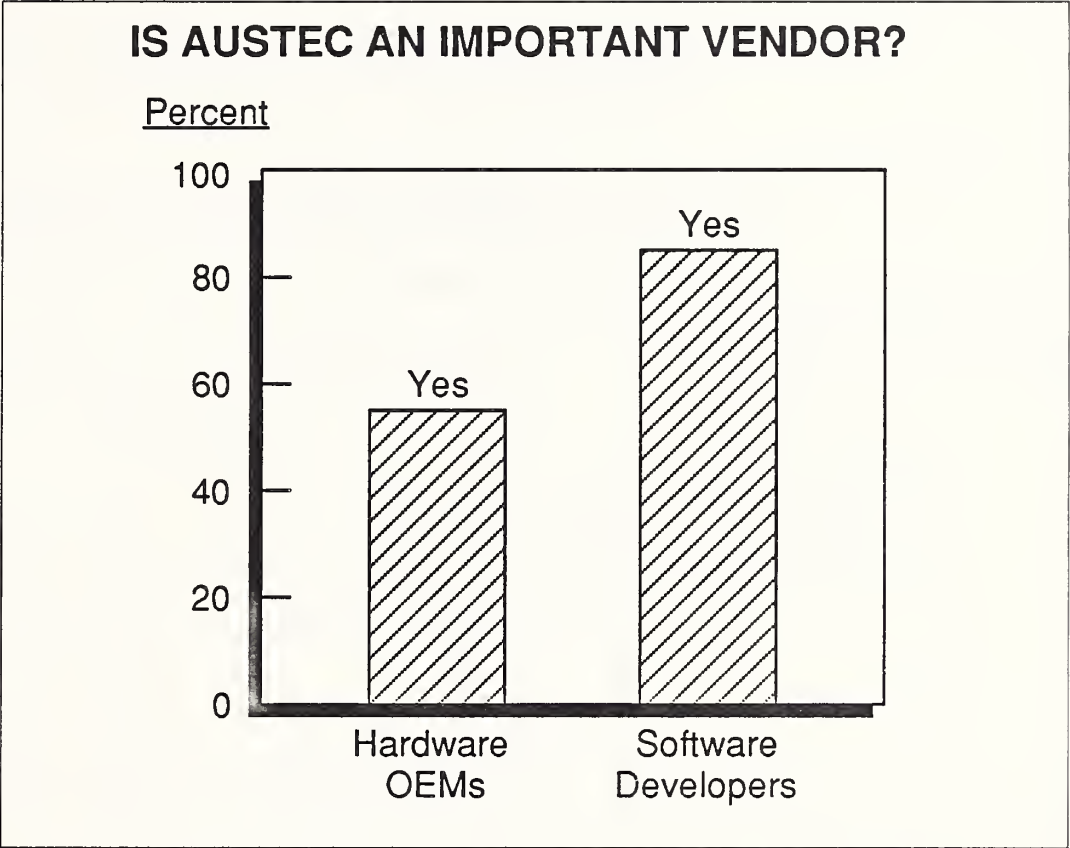
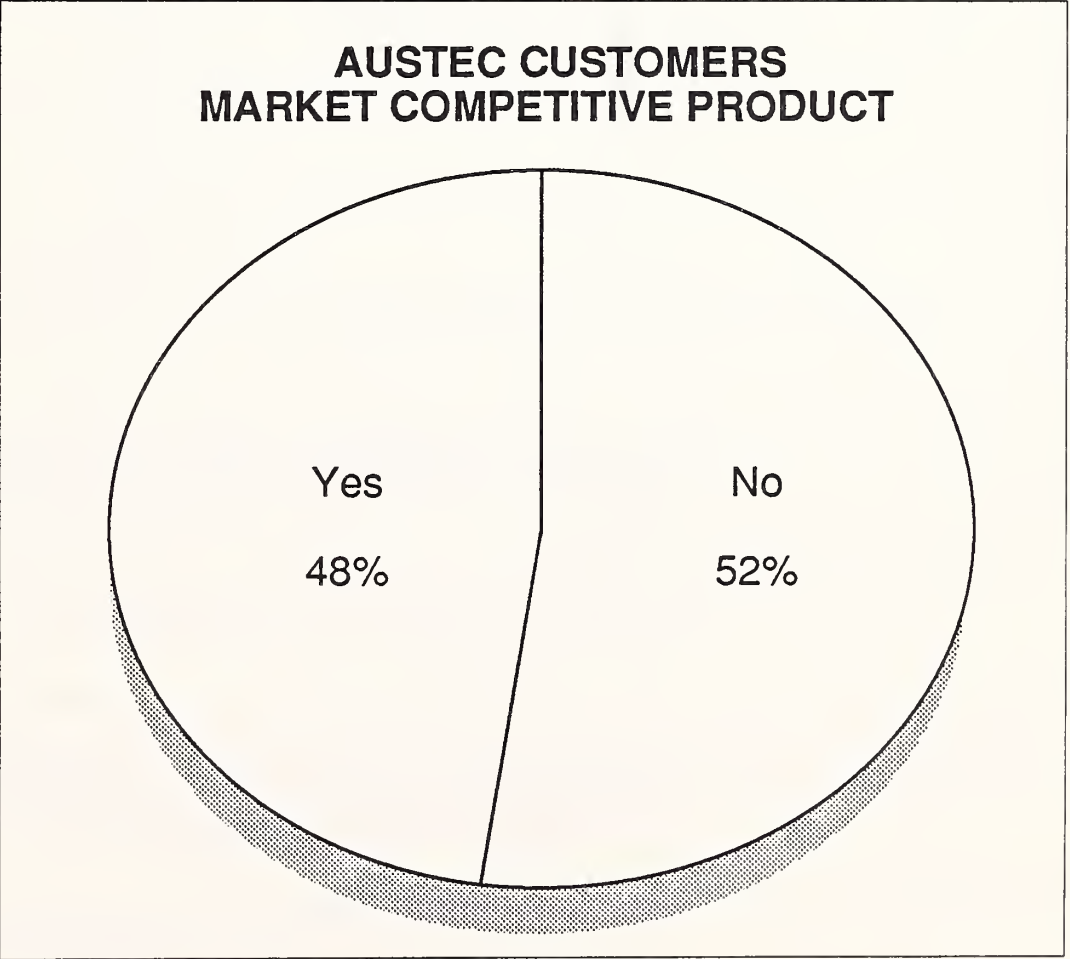


EXHIBIT V-4





Virtually every explanation of why Austec customers market a second product was related to the poor performance of Austec's COBOL compiler. The speed of MicroFocus was often cited for comparison purposes.

During the interviews INPUT attempted to gather subjective assessments about issues of quality. Exhibit V-5 contains a synopsis of the comments about Austec's corporate strengths and weaknesses.

EXHIBIT V-5

<b>CUSTOMERS' ASSESSMENT OF AUSTEC</b>	
<b>POSITIVE</b>	<b>NEGATIVE</b>
Portability of COBOL Products	Not Sensitive to Customer Complaints
Operate on Multiple Operating Systems	Products Have Not Kept Up with Market
Delivery Is Timely	Merger Has Hurt Customer Relations
Financial Stability	Recent Price Increases Are Too Great
	Product Publicity Is Lacking with Austec

The positive aspects generally repeat the same historic strengths of Ryan-McFarland: portability and operating system independence. In addition, Austec has brought a level of financial stability, which customers view favorably.

The negative comments are quite interesting.

- We often heard that Austec does not communicate with its customers.
- A second issue that was prevalent in our interviews related to the fact that Austec is hanging on to aging technology. Competitors are offering better and faster COBOL compilers.
- Pricing issues were raised often enough to at least note. However, this was not raised often enough to cause alarm.

- Even though Austec showed us newly designed sales material, it has not been presented to the current customer base.

**E****Specific Product Evaluations**

During our interviews with customers, we asked a number of specific questions about the Austec products in use or marketed.

Exhibit V-6 shows a summary of the specific interviews that took place.

**EXHIBIT V-6****AUSTEC PRODUCT REVIEWS**

PRODUCT	SOFTWARE FIRMS	HARDWARE OEM
RM/COBOL-74	13	5
RM/COBOL-85	7	4
Austec/COBOL	0	1
RM-FORTRAN	3	0
Total	23	10

We interviewed 27 customers and were able to get 33 product reviews. This is only slightly more than one per customer.

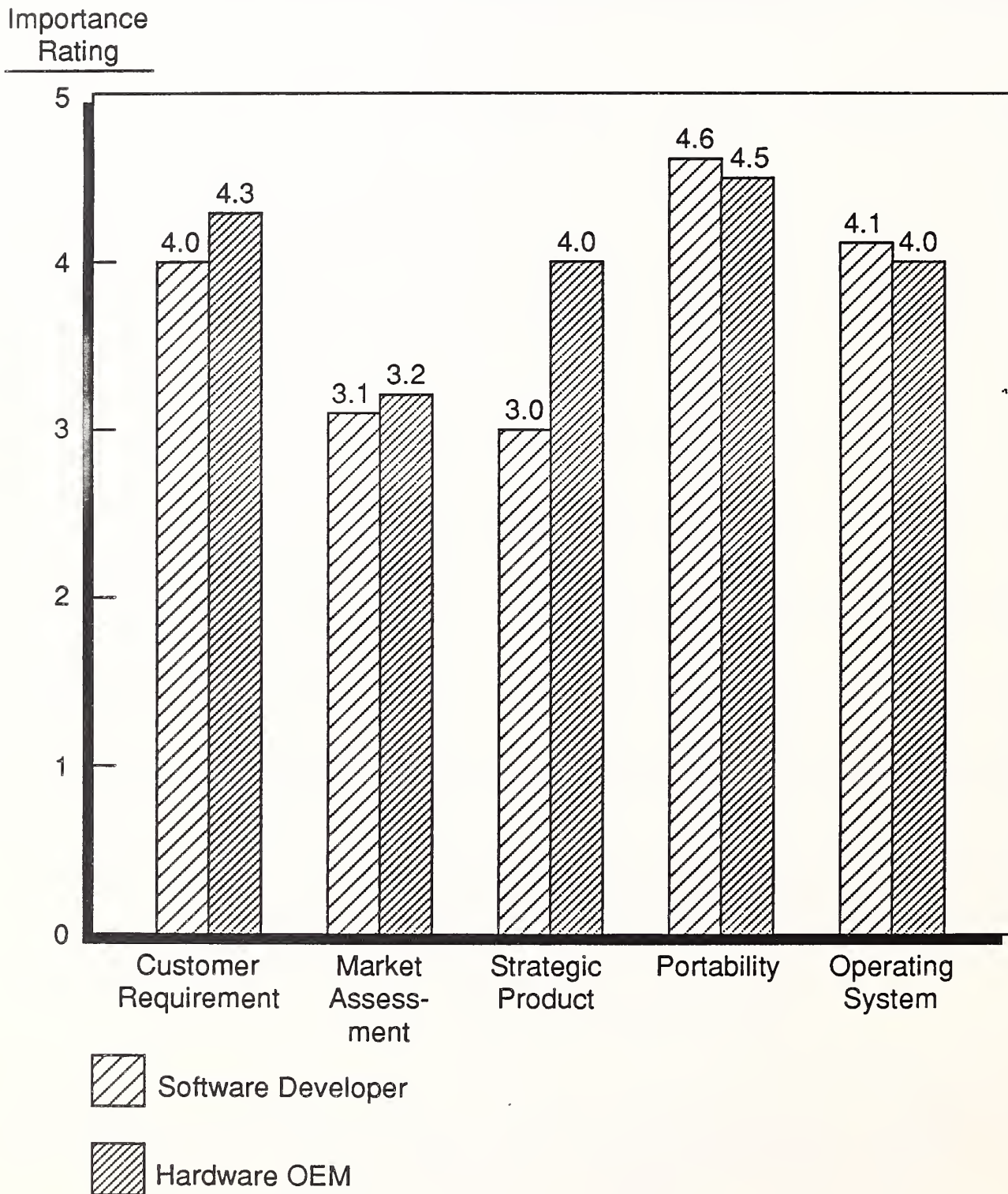
Most hardware vendors market both COBOL and FORTRAN compilers. However, rarely do they market both from Austec. We would have expected to see more.

**F****RM/COBOL-74**

The RM/COBOL-74 product is by far the most firmly entrenched in the product line. Although it is an aging product and already replaced by the 85 compiler, there is a very loyal following.

Exhibit V-7 displays the reasons why the customers made the purchase decision.

EXHIBIT V-7

**REASON FOR SELECTING RM/COBOL 74**

Often customers choose Austec's products because that's what the end-user wants. This response was very common. INPUT believes this sort of preference may work against Austec in the future, because the wishes of hardware vendors' customers often change. If a change happened, Austec would be unaware of this sort of changed preference, unless it paid special attention.

Several Austec competitors offer compiler portability and support for UNIX, so these two technical advantages for Austec are likely to diminish.

Exhibit V-8 shows the comments made about the BM/COBOL-74 compiler. The weaknesses make Austec very vulnerable to competition.

- COBOL programmers are learning about the benefits of new development tools available from some vendors. The tools simplify the programmer's job by reducing programming tasks and helping to debug programs.
- The slow speed of the compiler causes a recurring penalty for Austec's customers as they continue using Austec's compiler. A performance burden is something people eventually decide to shed.
- Negative customer comments about customer support were frequent, but not from everybody. However, the customers who raised it as an issue felt that it was a serious problem.

#### EXHIBIT V-8

### CUSTOMER COMMENTS ABOUT RM/COBOL-74

STRENGTHS	WEAKNESSES
Application Portability	Lacks Development Tools
Certification	Slow Compiler
Installed Base	Lack of Customer Support
Screen Handling	Compiler and File Size Limits
	Slow Disk Access



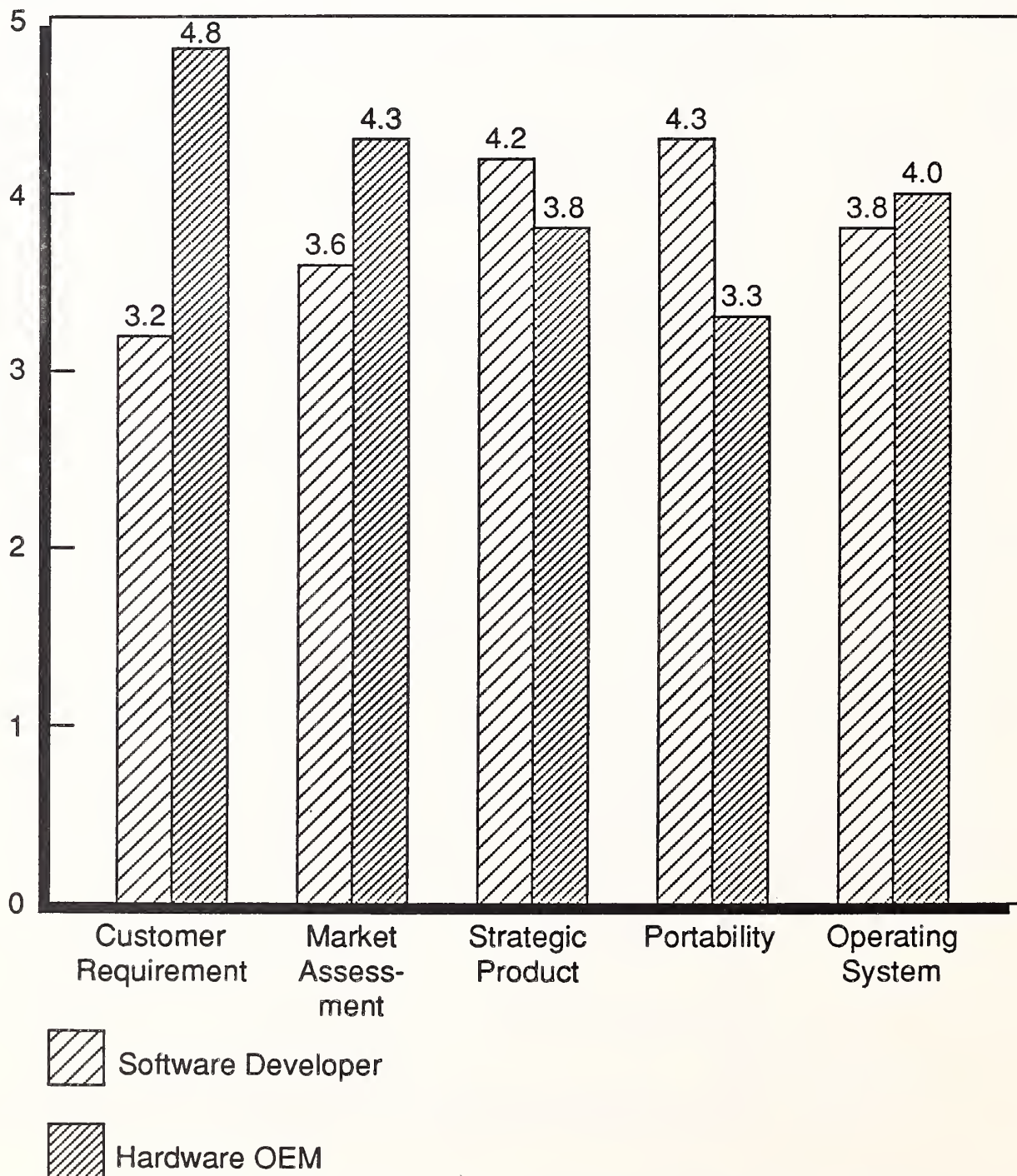
G

## RM/COBOL-85

Exhibit V-9 depicts the reasons why the customers selected the RM/COBOL-85 compiler. Unfortunately, since all aspects were rated relatively high, the factors did not prove to be very meaningful.

EXHIBIT V-9

## REASON FOR SELECTING RM/COBOL-85

Importance  
Rating



The information shown in Exhibit V-10 is considerably more useful. Unfortunately, the negative comments seem to outweigh the positive, yet the customer uses the compiler.

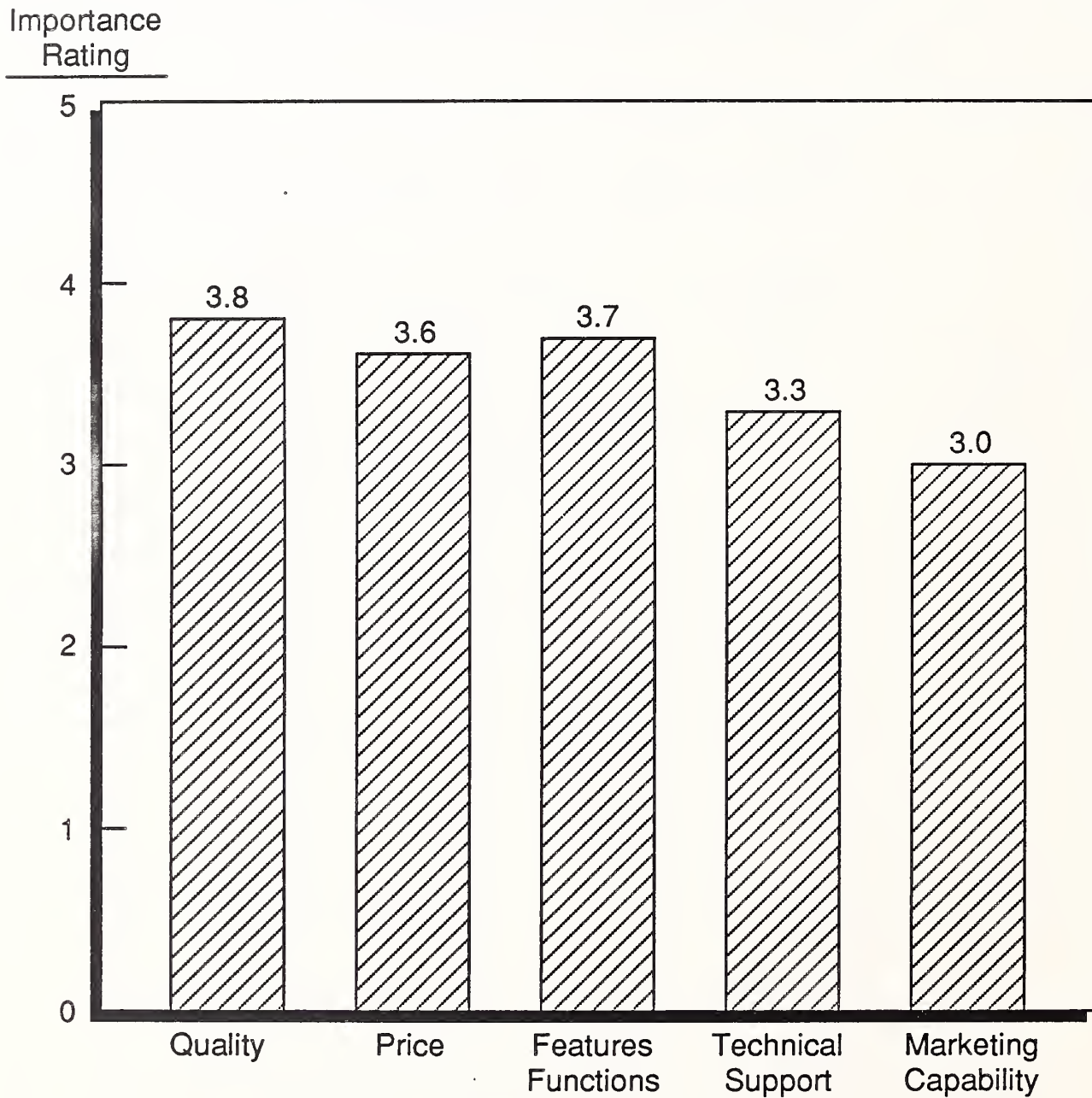
- Austec's license arrangement provides for a high runtime fee. Some customers find this high fee objectionable, particularly now that MBP is marketing its compiler and does not charge a runtime fee.
- In customer interviews we learned that there were some initial difficulties going from the 74 compiler to the 85 compiler. Austec now claims that the 85 compiler can handle unmodified source programs that had used the 74 compiler. We did not verify this assertion.
- Competitive feature-and-function criticisms were also raised about this compiler. This turned out to be a common theme.

EXHIBIT V-10

CUSTOMER COMMENTS ABOUT RM/COBOL-85	
STRENGTHS	WEAKNESSES
Compliance with ANSI 85 Standard	License Arrangement
Application Availability	Performance on 80386
Operating System	Not True Compiler
Market Presence	Upgrade Path from COBOL-74 to COBOL-85
	No Interactive Debugger
	Lacks Report Writer and Screen Handler
	Behind Competitive Products

We asked the customers to give their ratings on the RM/COBOL-85 compiler. They rated quality, price, features & functions, technical support, and marketing capability. The results of our questions are displayed in Exhibit V-11

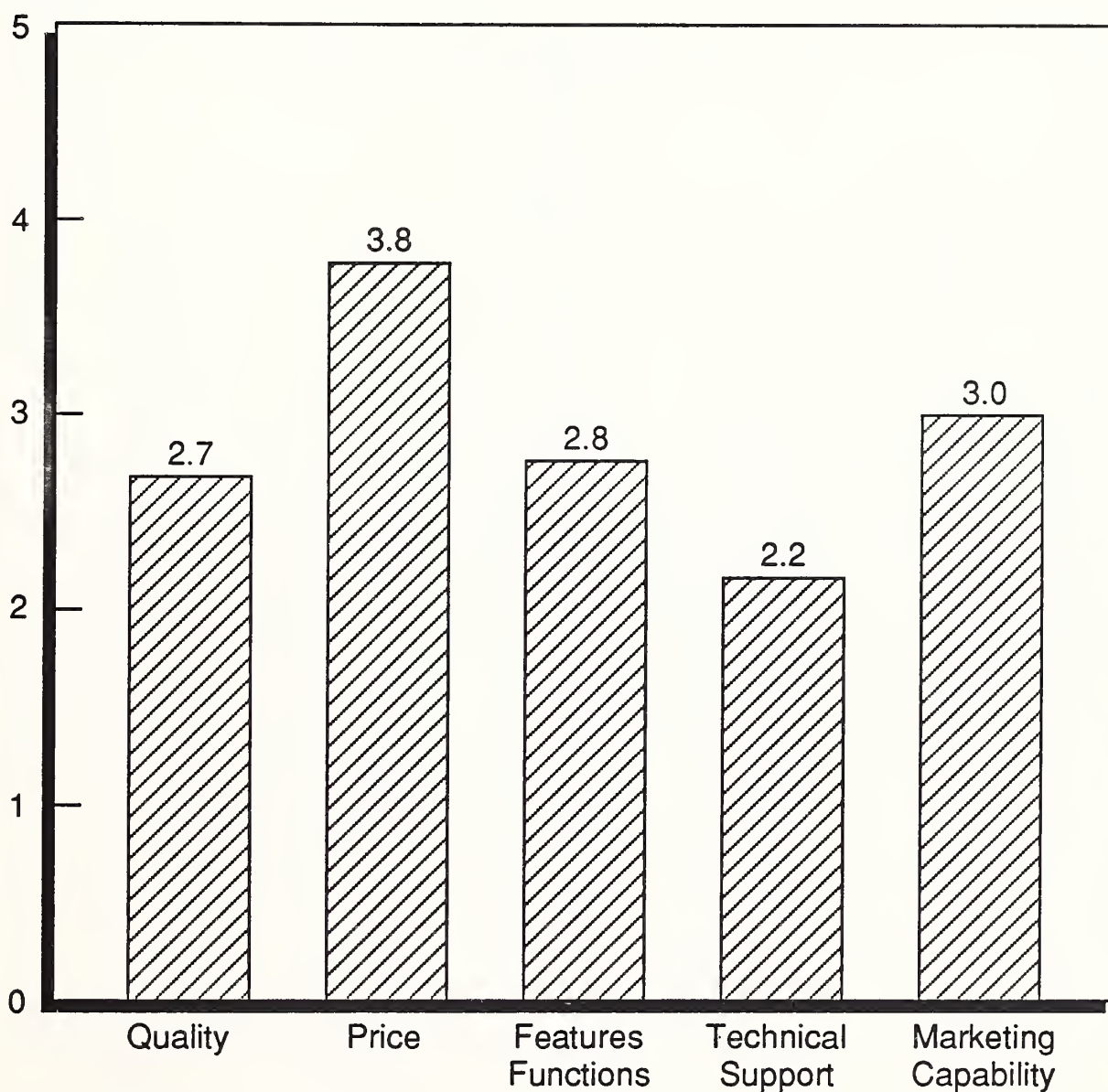
EXHIBIT V-11

**CUSTOMER RATING OF RM/COBOL-85**

Unfortunately the responses proved to be clustered, and in a range that we don't believe is very meaningful. These ratings do not seem to confirm the comments we just presented.

We gathered information from Austec's competitors, and they rated the same factors. The results of these questions are shown in Exhibit V-12.

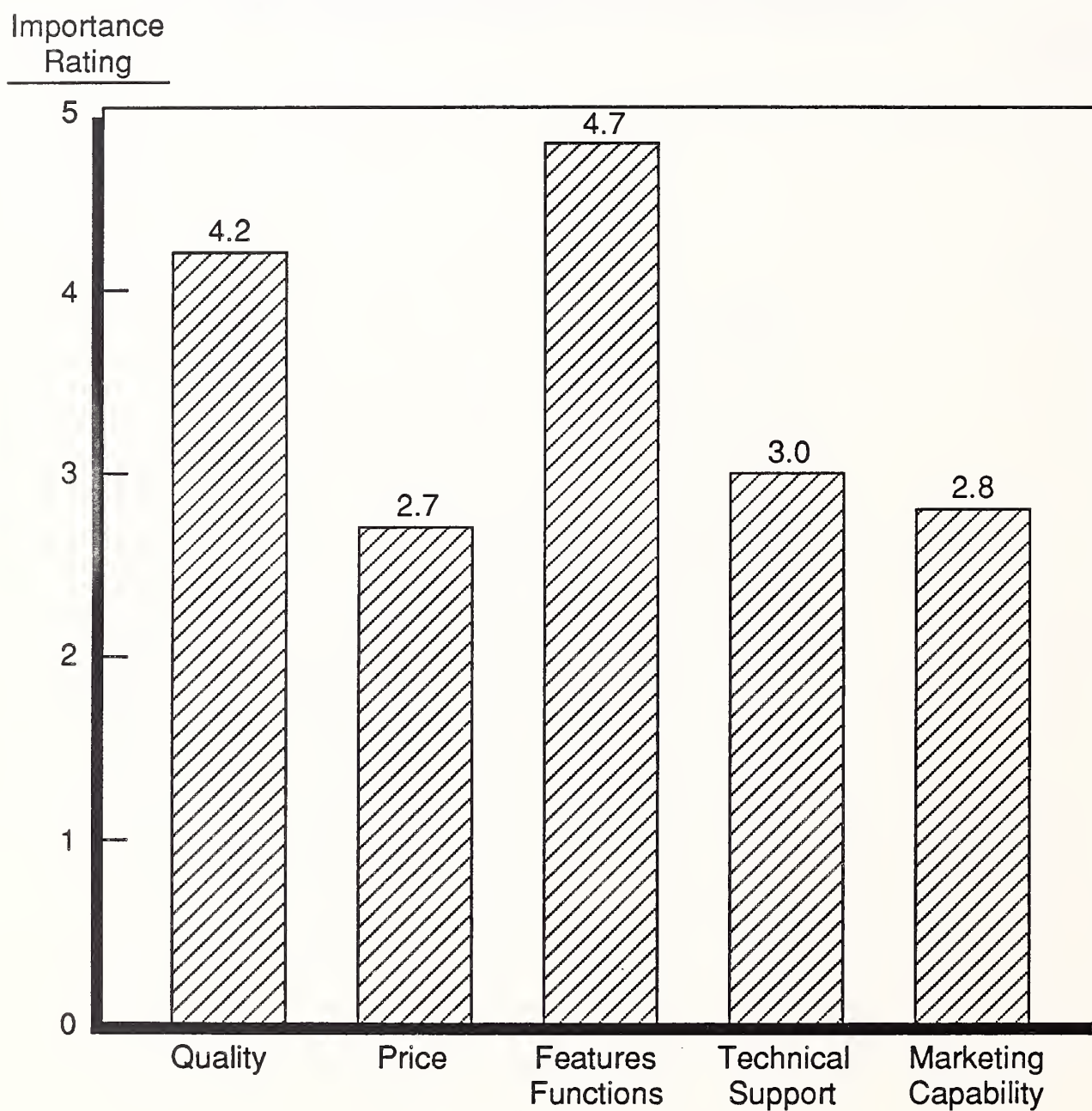
## EXHIBIT V-12

**COMPETITOR RATING OF RM/COBOL-85**Importance  
Rating

INPUT believes that these ratings also show how the competitors are “attacking” Austec in the marketplace. Low ratings on technical support can be devastating to a vendor of system software products.

For comparison purposes we compiled a chart on how the competitors rated MicroFocus. Austec appears to be most vulnerable to competition from MicroFocus. The results of this survey are shown in Exhibit V-13.

EXHIBIT V-13

**COMPETITOR RATING OF MICRO FOCUS-COBOL**

The high rating for features and functions points out one of the areas for Austec to protect itself.

The low rating on price implies that MicroFocus prices are higher than Austec's. A high rating is favorable and a low rating is unfavorable.

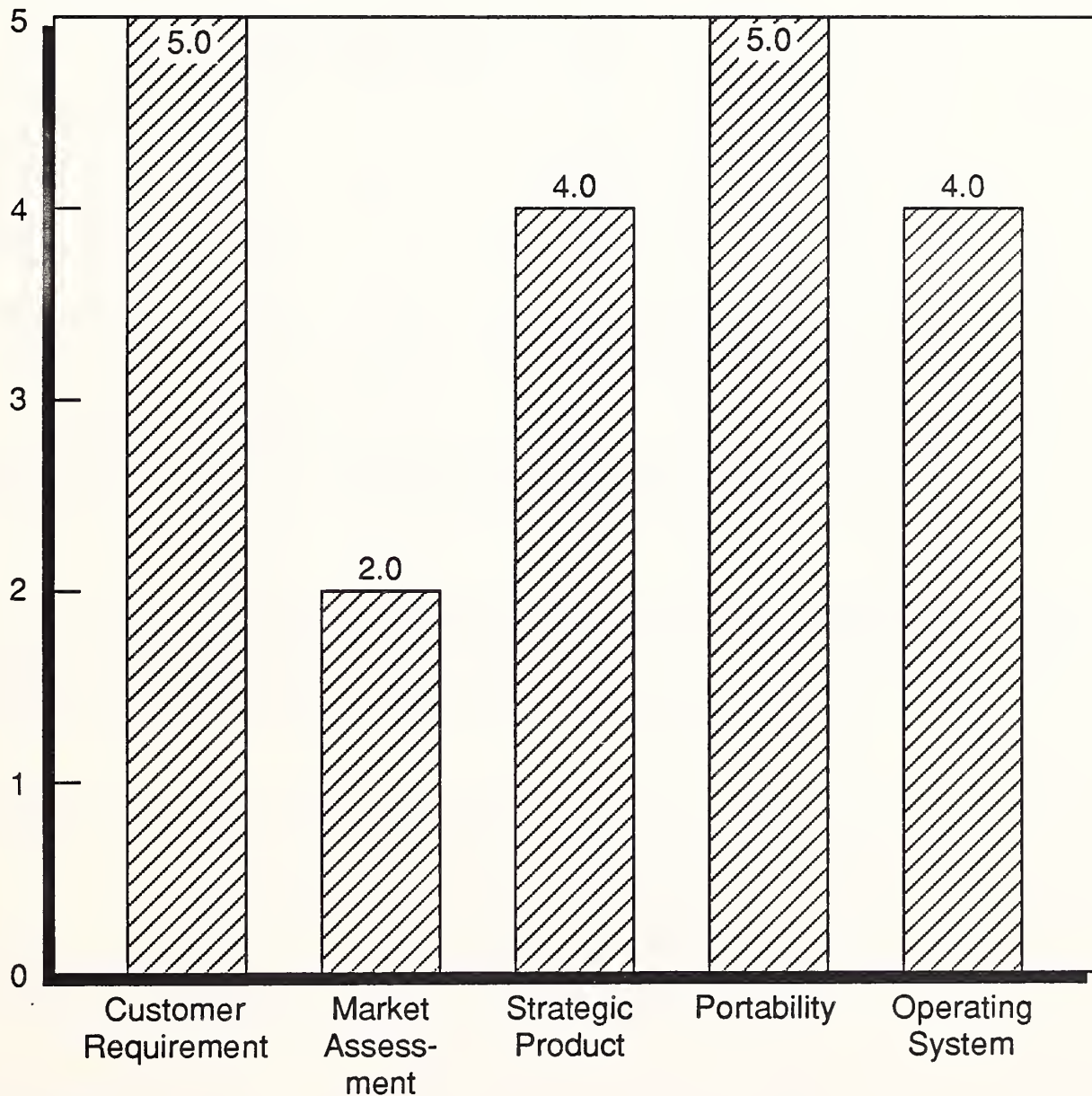


**H****RM/FORTRAN**

INPUT found that there was a much higher level of satisfaction among Austec's FORTRAN customers than among their COBOL customers. Exhibit V-14 displays the reasons why the Fortran compiler was chosen.

**EXHIBIT V-14****REASON FOR SELECTING RM-FORTRAN  
(Software Developers Only)**

Importance  
Rating





Customer requirement means that Austec's customer was satisfying a request from his customer.

Portability has been the real strength of all of Ryan-McFarland's products. Again, we suggest that the value of this attribute will rapidly diminish.

Exhibit V-15 displays the customer's subjective comments about the Fortran compiler. This compiler seems to get better marks than the Cobol compiler.

EXHIBIT V-15

CUSTOMER COMMENTS ABOUT RM/FORTRAN	
STRENGTHS	WEAKNESSES
Quality of Code Generated	Not Full ANSI Standard
Compatibility with Mainframe FORTRAN	Lacks Argument-Type Checking
	Bugs in Compiler

## I

### Austec-Cobol

One customer we contacted had been a user of the Austec Cobol product. However, that customer is in the process of replacing the product with a COBOL compiler from LPI. Exhibit V-16 shows the factors that contributed to the selection.

INPUT does not believe that the information lends any new insight.

Exhibit V-17 provides considerably more information.

- The customer got the compiler for a very low price. That customer appears to have gotten what it paid for. The compiler was slow, contained many bugs, and was inadequately supported by Austec.
- This was only one interview and has not been confirmed with other customers. However, we do understand that Austec has discontinued marketing this compiler in favor of the RM/COBOL-85 product.

EXHIBIT V-16

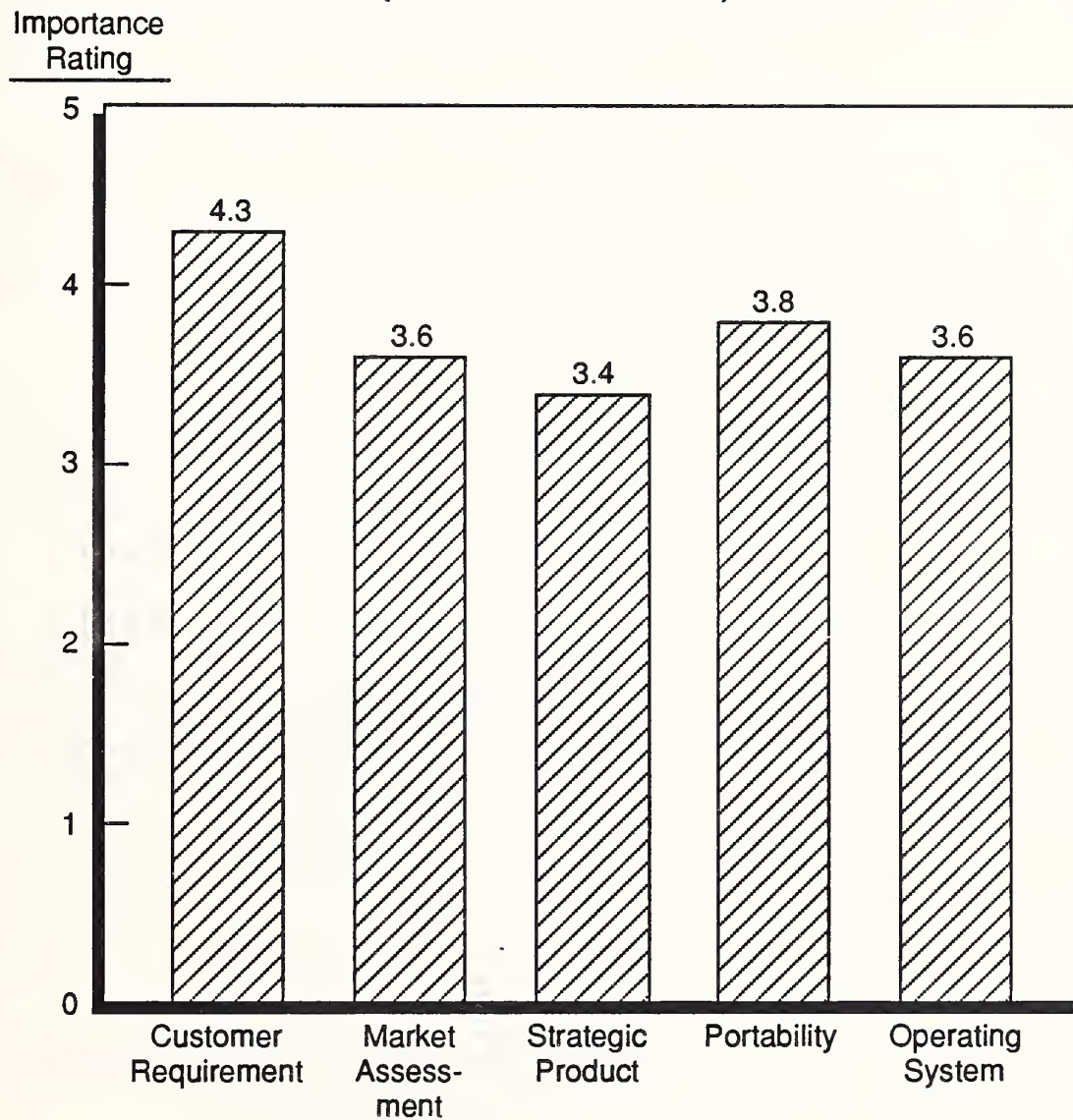
**REASON FOR SELECTING AUSTEC-COBOL  
(One Hardware OEM)**

EXHIBIT V-17

**CUSTOMER COMMENTS ABOUT  
AUSTEC COBOL**

Strengths	Weaknesses
Price	Speed
	Poor Support from Austec
	Bugs

**J****Service and Support**

INPUT believes that vendors of sophisticated program development products will need to provide a broader array of support services than are currently offered. These services will likely fall into the following areas:

- **Initial Installation Support**—Training and support for customization of the products.
- **Ongoing training**—Training available for customer's new employees, as well as instruction to more effectively use the productivity enhancement tools. INPUT has found that complex software products are rarely fully understood during the initial installation period.
- **Support Center Services**—Customers expect to be able to access an expert when they have problems. Most major software vendors offer hot-line assistance for their customers. Often customers pay a separate fee for these services. Established vendors report that ongoing services contribute profits, if care is taken in managing them.

In our interviews with Austec management we were told that Austec does not believe their customers want support services and training. Our interviews with customers contradicted Austec's view. As a matter of fact, many complained that technical support from Austec was nonexistent, and caused them difficulty in effectively using the products.

We questioned Austec's competitors about their views on training and support services. Exhibit V-18 shows the type of review they offer.

EXHIBIT V-18

**ADDITIONAL SERVICES OFFERED  
BY COMPETITORS**

- Training
- Implementation Support
- Conversion Assistance
- Customization

- Four of the five Austec competitors indicated that customers are willing to pay for additional training and support services.
- Two charge for hotline support and ongoing maintenance, including upgrades and enhancements.
- Austec provides a 30-day product warranty. Most of their competitors offer one year of maintenance bundled into the initial license fee.

INPUT believes that Austec is not aware of the need its customer base has for service. Today's program development tools are much more complicated than the initial compilers marketed by Ryan-McFarland. Everybody expects that this complexity will increase, thereby causing a need for even more support.

We asked the competitors to describe their thoughts about the future needs for services. Except for Austec, all believed that customers would require more service.

- Customers will want more training.
- Some customers will contract for implementation and conversion assistance.
- Some large end-users will expect to have available and be willing to pay substantial fees for customized products.

## K

### Status of New Products

Although we don't have any hard evidence, Austec's newer products, RM/COBOL-Master and ACE-Net, do not appear to be very successful.

- Austec management was not able to describe major sales success stories. A comment was made that "perhaps these products are ahead of their time."

INPUT was not able to gather information about these products because we were unable to locate customers using them.

We believe that these new products are more complex than the established compiler product lines. Therefore Austec will need to employ different selling and support programs.



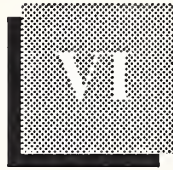




# Conclusions







## Conclusions

### A

#### Market Focus

INPUT's analysis of the survey data reveals that the market for compilers and software development products is no longer a single market. There are basically four very different markets.

- **Small software developers**—(Ryan-McFarland's initial targets). This market is composed of many small companies developing software applications for niche markets. These companies want to be confident that their products will run on the broadest range of computer platforms. They also want to minimize their operating cost by limiting the versions of their products they have to maintain.
  - The interests of these companies are being well served by the increasing acceptance of UNIX and OS/2. They are attracted to the productivity benefits attained by using 4GLs and Relational Data Base Management Systems. These are now available on a wide array of UNIX and 80386 computers.
- **Hardware OEMs**—Most hardware OEMs offer more than one compiler. As a matter of fact, they offer as many as they can, since their customers often have strong preferences for particular products. Often these preferences differ widely. When a hardware vendor picks a preferred compiler, it opts for performance, innovative features, and functions.
- **Large End Users**—The very large computer shops have massive backlogs for new system development projects. They are seeking ways to reduce these backlogs by improving programmer productivity.

- Today the greatest hope comes from the latest innovations in software development productivity tools. Large end users are prepared to pay substantial fees to vendors that can demonstrate they offer a solution to their problems. However, they expect to see a long-term commitment to their businesses.
- **Retail Channels**—More and more software is sold through retail channels. This is a high-volume/low-unit-revenue business. It demands frequent product innovations. It also requires products to be of the highest quality.

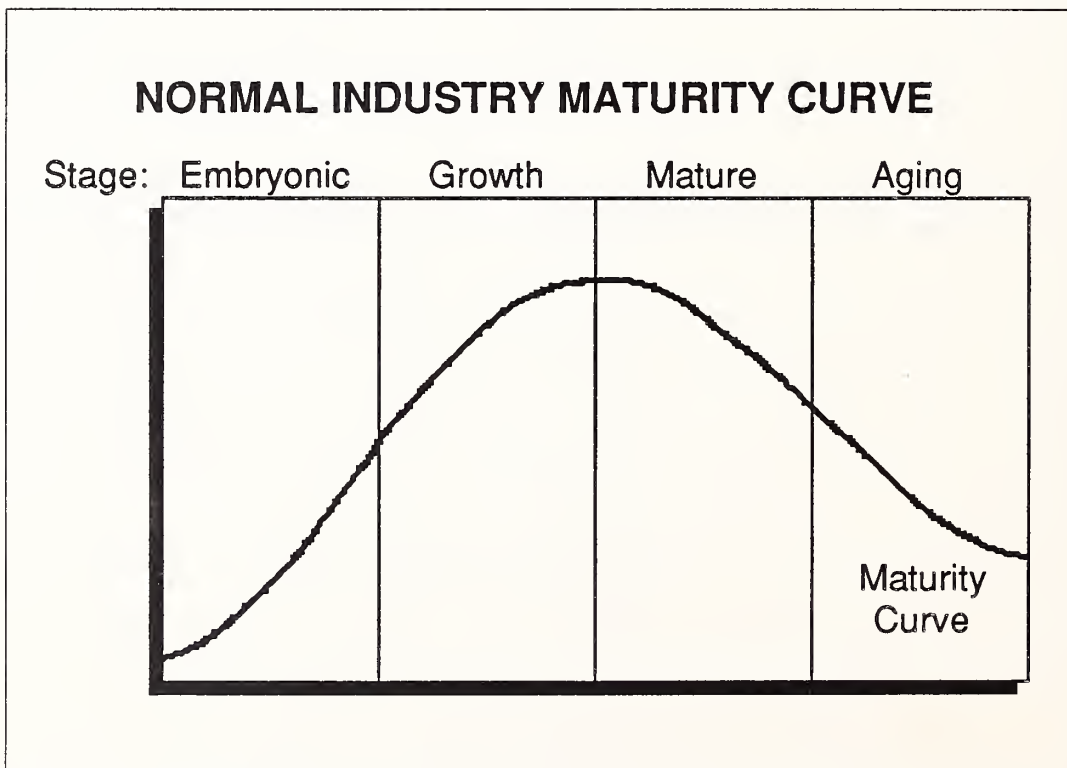
A vendor will not be successful in all segments, because the requirements are so different. Unfortunately, it appears that Austec is trying to provide something for everybody, and therefore not doing particularly well.

## B

Is Austec's Market a Growth Market?

Markets, as well as products, go through very defined life cycles. Exhibit VI-1 shows the typical cycle of market maturity.

EXHIBIT VI-1



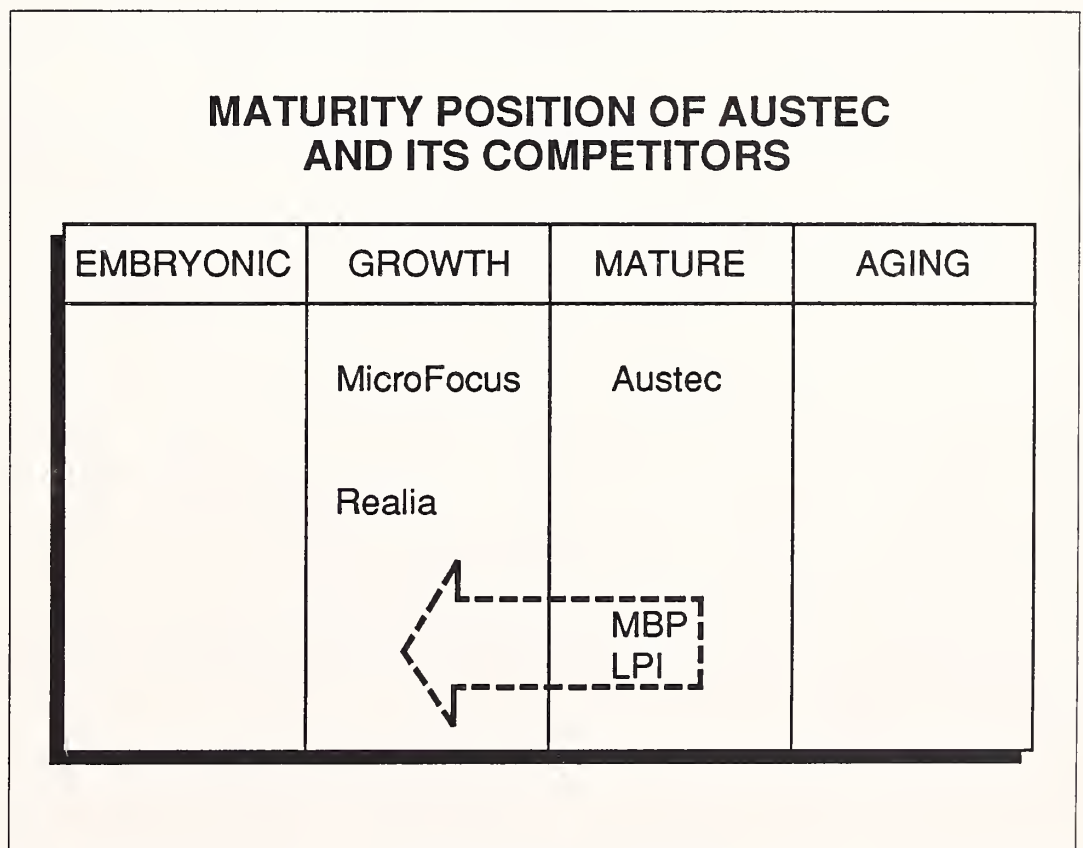


- During the embryonic stage, customer relationships are established, product credibility is proven, and niches are carefully identified.
- In the growth phase revenues tend to increase, market share increases, and competitive forces are controlled.
- At some point the cycle moves to the mature phase, where revenue growth rates diminish and customers tend to look to competitive products.
- During the final phase, aging, a company must look to other products or markets for its growth.

INPUT believes that Austec's products are in the mature or even the aging stage of the market cycle. Austec recognizes this and talks about the new growth areas. Unfortunately, Austec seems to want to be everywhere.

Our study of Austec's competition reveals that each competitor has a pretty good handle on its own market niche. Exhibit VI-2 shows where INPUT believes each competitor is positioned in its chosen niche.

EXHIBIT VI-2



- MicroFocus is targeting the end-user marketplace, which is expected to grow very rapidly. INPUT believes that MicroFocus understands what it will take to be successful. The company claims it "can get any major account it goes after." MicroFocus also stated that Austec is rarely a strong competitor for the largest end-user accounts.
- Realia has carefully targeted mainframe installations that want to move development from mainframes to PCs. The Realia product line is not as broad as MicroFocus', but Realia's prices are also not as high.
- MBP and LPI are both responding to the demands for higher-performance compilers. Many hardware vendors are turning to these companies for new generations of compilers. Rarely do hardware companies develop their own compilers.
- INPUT believes there are significant opportunities in this niche. However, success will depend on very well tuned products and an emphasis on quality.

## C

### What Should Austec Do?

Austec has the advantage of very good name recognition and a very broad customer base. It needs to choose a new focus. Its existing product line is aging, and its bread and butter customers, the software developers, are turning to new software development technologies.

In order to implement a new product strategy, the company must also improve its development cycle. Austec explained that in order to assure object code compatibility across all hardware platforms, it takes three years to develop and release new products. This lengthy cycle is not acceptable in a market that is so competitive and is seeing rapid introduction of new products from the competition.

Austec must also change the way it deals with its customers.

- The company must provide the services its customers can receive from Austec's competitors.
- Austec should also spend time establishing or restoring the loyal customer relationships that existed in the past.

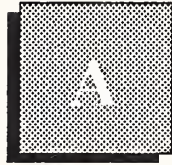
INPUT believes that Austec can still be a major player in the new market for enhanced programmer productivity software, but clearly it ought to make some changes.



## Appendix: Profile of Key Executives







## Appendix: Profile of Key Executives

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### **Les McNeill, Chairman and Chief Executive Officer**

McNeill, 43, has taken the company from its beginnings as an applications and systems software consultancy to its present status as multinational systems and software developer. Before founding Austec, McNeill managed a variety of information systems activities with several Australia-based companies, including Brashs, an electrical and musical goods specialty retail chain, and Commercial and Industrial Computer Services Pty. Ltd., a computer services bureau. He also served as a senior consultant for Management Information Systems Pty. Ltd.

McNeill holds a business degree in computers from CIT Melbourne University. He was elected a member of the Australian Computer Society in 1972.

### **Tom Pelandini, President**

Pelandini, 49, is responsible for the day-to-day management of Austec internationally, and reports directly to Les McNeill. With more than 20 years of experience in marketing and communications, he served as vice president, public affairs for Crocker Bank, and as general manager for two international public relations consulting firms: Hill and Knowlton, Inc., and Manning, Selvage & Lee, Inc.

Pelandini holds a bachelor of arts degree in communications from the University of Washington.

### **Pat Conroy, Senior Vice President, International Operations**

Conroy, 38, is responsible for Austec's sales and marketing activities outside of the U.S. Previously, he served as general manager for the company's Melbourne office. His background includes 11 years with



ICL in sales and sales management. Conroy also served as a branch sales manager for Control Data Australia.

**Paul Davis, Senior Vice President, Technology**

Davis, 37, is responsible for product planning and development, engineering, and technical support. Prior to joining Austec, Davis served in senior technical positions with several computer companies in Australia, including Prime Computer, CL Systems, General Automation, and NCR Corporation.

Davis holds a bachelor of communications engineering degree from the Royal Melbourne Institute of Technology and is a member of the IEEE Computer Society.

**Brian Wadsworth, Senior Vice President, Marketing**

Wadsworth, 39, is responsible for Austec's worldwide strategic marketing. Previously he served as general manager of company's London office. Before joining Austec, Wadsworth was the marketing manager of Consultant Computer and Financial, specialists in providing systems to the finance and securities industries. Before that, he headed the International Systems Group of Atari Corporation, where he developed and instituted a coordinated systems strategy for the company's international subsidiaries.

Note: Information could not be obtained about Mr. Ferguson or Mr. Chubb.



## Appendix: Customer and Competitor Questionnaires

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Catalog Number \_\_\_\_\_

ST1 \_\_\_\_\_ ST2 \_\_\_\_\_ ST3 \_\_\_\_\_

ST4 \_\_\_\_\_ ST5 \_\_\_\_\_ ST6 \_\_\_\_\_

AUSTEC 4/28/88

## RESELLER QUESTIONNAIRE

Hello, my name is \_\_\_\_\_ and I am with INPUT, a market research firm that specializes in information systems. We are conducting a study of language compilers, software development tools, and communications software. We would like to ask some questions regarding products which your company remarkets. In return for your help, we would like to give you an executive overview of one of our published reports. Of the following, which one would you like to receive? (Circle Choice):

A. *U.S. Turnkey Systems Markets, 1987-1992*

B. *Software Products Markets, 1987-1992*

C. *Distributed Data Base Management: An Early Look*

Thank you, may we proceed?

If Yes, go to 1.

If No, reply to objection. Cite the following only if requested.

The information you provide will be used for statistical purposes only and neither you nor your organization will be identified or linked to any information. (Check here if statement made \_\_\_\_ (7).

First, I would like to ask a few questions about your business.

**QU: 1** Which of the following descriptions best describes your company?

101. Independent Software Company \_\_\_\_\_

102. Hardware Manufacturer \_\_\_\_\_ \*

103. Value-Added Reseller (H/W with S/W) \_\_\_\_\_ \*

104. Hardware-Only Reseller \_\_\_\_\_ \*

105. Other \_\_\_\_\_

106. Please describe in space above.

**QU: 2** \* If yes to selling hardware (102, 103, 104), please indicate which of the following types of computers you market, or go to #3.

201. PCs \_\_\_\_\_

202. Workstations \_\_\_\_\_

203. Minicomputers \_\_\_\_\_

204. Mainframes \_\_\_\_\_

205. Other \_\_\_\_\_

(Questions 3 through 7 intentionally left out)

**QU: 8** If respondent sells hardware go to question 9.

Please identify the hardware on which your software runs.

801. PCs \_\_\_\_\_

802. Workstations \_\_\_\_\_

803. Mini Computers \_\_\_\_\_

804. Mainframes \_\_\_\_\_

**QU: 9** What Operating Systems do you use?

901. Hardware Vendor proprietary operating systems like MVS from IBM or VMS from DEC. Please describe \_\_\_\_\_

902. UNIX \_\_\_\_\_ 903. XENIX \_\_\_\_\_ 904. MS-DOS \_\_\_\_\_

905. Other: \_\_\_\_\_

**QU: 10** Do you use Cobol Compilers, Fortran Compilers, Software Development tools, from \*any of the following vendors?

1001. Austec/Ryan McFarland \_\_\_\_\_

1002. Language Processors Inc \_\_\_\_\_

1003. MBP \_\_\_\_\_

1004. Micro Focus \_\_\_\_\_

1005. Microsoft \_\_\_\_\_

1006. Philon \_\_\_\_\_

1007. Realia \_\_\_\_\_

1008. Other \_\_\_\_\_ Name Please (1009) \_\_\_\_\_



If Austec is not among the vendors listed go to # 47.

I see you license products from Austec/Ryan McFarland. That is one of the companies about whose products we are interested in gathering additional information.

**QU: 11** First, we would like to know what attribute you consider to be important in a successful business relationship with a systems software vendor. Please rate the following factors on a scale of 1 to 5, where 5 is the most important.

ATTRIBUTE	IMPORTANCE RATING	AUSTEC
1101. Quality of Management	_____	1201. _____
1102. Product Line Breadth	_____	1202. _____
1103. Meets Commitments	_____	1203. _____
1104. Technology Leadership	_____	1204. _____
1105. Marketing Capability	_____	1205. _____
1106. Value of Products (Price vs Benefit)	_____	1206. _____
1107. Financial Stability	_____	1207. _____

**QU: 12** Now, would you rate the same attributes to evaluate Austec? Let's start with...

**QU: 13** On \_\_\_\_\_ you rated Austec high; please explain?

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**QU: 15** On \_\_\_\_\_ you rated Austec low; please explain?

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**QU: 17** Is Austec/Ryan-McFarland an important vendor to your company?

Yes \_\_\_\_ No \_\_\_\_ No Response \_\_\_\_

Why? \_\_\_\_\_

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QU: 18 Which of the following Austec products do you market or use?

QU: 19 Please also tell us how long your company has been marketing or using the particular Austec product.

PRODUCT	MARKET (Y or N)	HOW LONG? (in yrs)	FAMILIAR ( Y OR N )
RM COBOL - 74	1801. _____	1901. _____	2000. _____
RM COBOL - 85	1802. _____	1902. _____	2002. _____
AUSTEC COBOL	1810. _____	1910. _____	2010. _____
RM - Master	1803. _____	1903. _____	2003. _____
ACENET	1804. _____	1904. _____	2004. _____
RM - Screens	1805. _____	1905. _____	2005. _____
RM - COS	1806. _____	1906. _____	2006. _____
RM - FORTRAN	1807. _____	1907. _____	2007. _____
OTHER, PLEASE DESCRIBE			
_____	1808. _____	1908. _____	2008. _____
_____	1809. _____	1909. _____	2009. _____

QU: 20 For the same products, but which you do not use or market, are you familiar with them? (YES OR NO) SPECIFIC PRODUCT SECTION

QU: 21 I would now like to ask you a few specific questions about the products which you have used or are familiar with:

(Interviewer: fill out one of these sections for up to three different products.  
Circle the product being discussed below.

**PRODUCT**

RM COBOL-74	2101	RM-COS	2106
RM COBOL-85	2102	RM-FORTRAN	2107
AUSTEC COBOL	2110		
RM-MASTER	2103	_____	2108
ACENET	2104	_____	2109
RM-SCREENS	2105		

QU: 22 What are the products' Key Strengths:

2201. \_\_\_\_\_
2202. \_\_\_\_\_
2203. \_\_\_\_\_

**QU: 23** What are the products' Major Weaknesses:

2301. \_\_\_\_\_
2302. \_\_\_\_\_
2303. \_\_\_\_\_

**QU: 24** Please Rate the product on the following factors, from 1 to 5, where 5 is the highest.

2401. Efficiency (Performance) \_\_\_\_\_
2402. Quality (Bug-Free) \_\_\_\_\_
2403. Functionality (Meets needs) \_\_\_\_\_
2404. Compliance w/ standards \_\_\_\_\_
2405. Competitiveness w/ sim. prod. \_\_\_\_\_
2406. Government Certification \_\_\_\_\_
2407. License Arrangement \_\_\_\_\_
2408. Satisfaction w/Port or Installation \_\_\_\_\_
2409. Overall Rating \_\_\_\_\_
2410. Other:\_\_\_\_\_ 2411 \_\_\_\_\_  
(DESCRIBE)

**QU: 25** You gave a HIGH rating to \_\_\_\_\_. Why? (Enter Code #)

\_\_\_\_\_

\_\_\_\_\_

**QU: 27** You gave a LOW rating to \_\_\_\_\_. Why? (Enter Code #)

\_\_\_\_\_

\_\_\_\_\_

QU: 29 Please rate on a scale of 1 to 5 ( where 5 is very important) why you chose AUSTEC as the supplier of this product.

2901. Customer Requirement \_\_\_\_\_

2902. Market Assessment \_\_\_\_\_

2903. Strategic Product \_\_\_\_\_

2904. Application Portability \_\_\_\_\_

2905. Operating System \_\_\_\_\_

2906. Other \_\_\_\_\_ 2907. \_\_\_\_\_

QU: 30 Approximately how many copies (site licences) of this product has your company sold? \_\_\_\_\_

QU: 31 Approximately how much money have you paid in royalty licence fees for this product? \_\_\_\_\_

QU: 32 Is your company satisfied with the operating profit margins obtained on this product?

Yes \_\_\_\_\_ No \_\_\_\_\_ Don't Know \_\_\_\_\_

QU: 33 Why? \_\_\_\_\_  
\_\_\_\_\_

QU: 34 Have you evaluated competitive product(s)?

Yes \_\_\_\_\_ No \_\_\_\_\_

QU: 35 Do you market competitive product(s)?

Yes \_\_\_\_\_ No \_\_\_\_\_

IF NO to both 34 and 35, go to question 37.

3500. Which competitors?

3501. \_\_\_\_\_

3502. \_\_\_\_\_

3503. \_\_\_\_\_

QU: 36 Which of those competitors is the strongest? \_\_\_\_\_  
(Enter question number from above.)

QU: 37 Would you please evaluate Austec's product and the competitive product you just mentioned on the following attributes using ratings from 1 to 5, where 5 is the highest?

ATTRIBUTE	AUSTEC	COMPETITOR
Quality	3701. _____	3801. _____
Price	3702. _____	3802. _____
Features/Function	3703. _____	3803. _____
Tech. Support	3704. _____	3804. _____
Marketing Support	3705. _____	3805. _____

38, 39, 40, 41 deliberately omitted.

QU: 42 If they sell competitive products (YES on Question 35), go to 43.

Why do you market more than one of this type of product?

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QU: 43 Do you think the importance of this kind of product is going to increase \_\_\_\_, decrease \_\_\_\_, or remain unchanged \_\_\_\_?

QU: 44 Why? \_\_\_\_\_

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QU: 45 In providing this type of product, do you believe that AUSTEC will be a strong leading vendor?

Yes \_\_\_\_ No \_\_\_\_ No Opinion \_\_\_\_

QU: 46 Why? \_\_\_\_\_

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IF more than one product, then fill out other forms and return to closing statement (Don't forget revenue and employee questions.)

QU: 47 Thank you for your time and your help on this matter. You should receive your summary report within two weeks.



I would like to verify that we have your correct mailing address. (Verify or fill out cover sheet, then ask following questions.)

Could you also tell me.....

QU: 48 Approximately how many sales offices do you have? \_\_\_\_\_

QU: 49 What are the total number of employees in your company?\_\_\_\_\_

QU: 50 Approximately how much revenue did your company have in 1987?\_\_\_\_\_

If he can't disclose, ask the following, else go to 52.

QU: 51 Could you tell me if your revenues were:

5201. Over \$1 billion \_\_\_\_\_

5202. \$100 million to \$1 billion \_\_\_\_\_

5203. \$25 million to \$100 million \_\_\_\_\_

5204. Under \$25 million \_\_\_\_\_

5205. Cannot disclose revenues \_\_\_\_\_

QU: 52 Again, thank you for your time and help.

CATALOG NUMBER \_\_\_\_\_

ST1\_\_\_\_\_ ST2\_\_\_\_\_ ST3\_\_\_\_\_

AUSTEC 4/27/88

## COMPETITOR QUESTIONNAIRE

Hello, my name is \_\_\_\_\_ and I am with INPUT, a market research firm that specializes in information systems. We are conducting a study of language compilers and software development tools. We would like to ask some questions regarding products which your company markets. In return for your help, we would like to give you an executive summary of one of our published reports. Of the following, which one would you like to receive? (Circle Choice):

A. *U.S. Turnkey Systems Markets, 1987-1992*

B. *Software Products Markets, 1987-1992*

C. *Distributed Data Base Management: An Early Look*

Thank you, may we proceed?

If Yes, go to 1.

If No, answer objection. Cite the following only if requested.

The information you provide will be used for statistical purposes only and neither you nor your organization will be identified or linked to any information. (Check here if statement made \_\_\_\_ (7).

QU: 1 We are particularly interested in companies that support COBOL on multiple hardware environments. Does your company market such a product?

Yes \_\_\_\_ No \_\_\_\_

QU: 2 Please name the hardware manufacturers on which your products run.

### MANUFACTURER

201. PC \_\_\_\_\_

202. Workstations \_\_\_\_\_

203. Mini Computers \_\_\_\_\_

204. Mainframes \_\_\_\_\_

QU: 3 What Operating Systems do you support?

301. Hardware Vendor proprietary operating systems like MVS from IBM or VMS from DEC. Please describe.

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302. UNIX \_\_\_\_\_ 303. XENIX \_\_\_\_\_ 304. MS DOS \_\_\_\_\_

305. Other \_\_\_\_\_

QU: 4 We would like to know what attributes about a vendor you believe your customers consider to be important in a successful business relationship with a systems software vendor. Please rate the following factors on a scale of 1 to 5, where 5 is the most important.

ATTRIBUTE	IMPORTANCE	SELF RATING
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401. Quality of Management	_____	501. _____
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402. Product Line Breadth	_____	502. _____
---------------------------	-------	------------

403. Meets Commitments	_____	503. _____
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404. Technology Leadership	_____	504. _____
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405. Marketing Capability	_____	505. _____
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406. Value of Products (Price vs Benefit)	_____	506. _____
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QU: 5 Now, would you identify which of the previous attributes are your company's three greatest strengths. Designate the strongest with a 1, the second with a 2, etc.

QU: 6 On \_\_\_\_\_ you ranked your company with 1; please explain.

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QU: 7 On \_\_\_\_\_ you rated your company with 2; please explain.

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QU: 8 On \_\_\_\_\_ you rated your company with 3; please explain.

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## SPECIFIC PRODUCT SECTION

QU: 9 I would now like to ask you a few specific questions about your product for COBOL development:

What do you call your product? \_\_\_\_\_

QU: 10 How long has it been on the market, in years? \_\_\_\_\_

QU: 11 What are the product's Key Strengths:

111. \_\_\_\_\_

112. \_\_\_\_\_

113. \_\_\_\_\_

QU: 12 Do you think the importance of this kind of product is going to increase \_\_\_\_, decrease \_\_\_\_, or remain unchanged \_\_\_\_?

QU: 13 Why? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

QU: 14 Approximately how many copies (site licences) of this product has your company sold? \_\_\_\_\_

QU: 15 Which of the following factors are important to your customers as they evaluate your products and those of your competitors. Rank them from 1 to 5 (5 is the highest).

1501. Efficiency (Performance) \_\_\_\_\_

1502. Quality (Bug-Free) \_\_\_\_\_

1503. Functionality (Meets needs) \_\_\_\_\_

1504. Compliance w/ standards \_\_\_\_\_

1505. Competitiveness w/ sim. prod. \_\_\_\_\_

1506. Government Certification \_\_\_\_\_

1507. License Arrangement \_\_\_\_\_

1508. Satisfaction w/Port or Installation \_\_\_\_\_

1509. Overall Rating \_\_\_\_\_

1510. Other: \_\_\_\_\_ 1511. \_\_\_\_\_  
(Describe)

QU: 16 Which of the following companies do you compete with?

	Y or N	Rank
1601. Applied Data Research	_____	_____
1602. Austec/Ryan McFarland	_____	_____
1603. Philon	_____	_____
1604. DISC	_____	_____
1605. Micro Focus	_____	_____
1606. Language Processors	_____	_____
1607. Realia	_____	_____
1608. Other _____ Name Please (1209.) _____		
1609. _____	_____	_____
1610. _____	_____	_____

Now, rank your competitors in order of importance using 1,2,3... where 1 is the leader.

QU: 17 Would you mind evaluating the competitive products from a few of the competitors we just mentioned on the following attributes, using ratings from 1 to 5, where 5 is the highest?

ATTRIBUTE	AUSTEC	DISC	REALIA	MICROFOCUS	PHILON
Quality	1701_____	1801_____	1901_____	2001_____	2101_____
Price	1702_____	1802_____	1902_____	2002_____	2102_____
Feature/ Function	1703_____	1803_____	1903_____	2003_____	2103_____
Tech. Support	1704_____	1804_____	1904_____	2004_____	2104_____
Marketing Capability	1705_____	1805_____	1905_____	2005_____	2105_____

QU: 23 You gave a HIGH rating to \_\_\_\_\_. Why? (Enter Code #)

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QU: 24 You gave a LOW rating to \_\_\_\_\_. Why? (Enter Code #)

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QU: 25 You gave a LOW rating to \_\_\_\_\_. Why? (Enter Code #)

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QU: 26 What do you consider to be the three biggest market challenges during the next few years?

2601. \_\_\_\_\_

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2602. \_\_\_\_\_

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2603. \_\_\_\_\_

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QU: 27 Which competitor is best positioned for these changes. Rate from 1 to 5 where 1 is the best.

**BEST**

AUSTEC 2701. \_\_\_\_\_

DISC 2702. \_\_\_\_\_

REALIA 2703. \_\_\_\_\_

MICROFOCUS 2704. \_\_\_\_\_

PHILON 2705. \_\_\_\_\_

\_\_\_\_\_ 2706. \_\_\_\_\_

\_\_\_\_\_ 2707. \_\_\_\_\_

QU: 28 Did any vendor have a significant lead in the past?

2801. \_\_\_\_\_

2802. \_\_\_\_\_

QU: 29 Do they still hold it? Yes \_\_\_\_ No \_\_\_\_

Why? \_\_\_\_\_

QU: 32 Would you rank the channels or distribution in the order of importance to your company.

INDEPENDENT S/W COMPANY	3201. _____	3301. _____
HARDWARE OEMs	3202. _____	3302. _____
VARs AND SYSTEM INTEGRATORS	3203. _____	3303. _____
HARDWARE RESELLERS	3204. _____	3304. _____
OTHER _____	3205. _____	3305. _____
_____	3206. _____	3306. _____
_____	3207. _____	3307. _____
_____	3208. _____	3308. _____

QU: 33 Using the above list, please indicate the distribution of your business by percent contributed by each of the channels.

QU: 34 Do you expect this mix of distribution channels to change in the future?

3401. Yes \_\_\_\_\_ 3402. No \_\_\_\_\_

Explain. \_\_\_\_\_

QU: 35 How important is the price of your product to the customer in making a purchase decision?

The key factor 3501. \_\_\_\_\_

One of many factors 3502. \_\_\_\_\_

Less importance than product features 3503. \_\_\_\_\_

QU: 36 Do your prices include bundled services, in addition to license fees?

3601. Yes \_\_\_\_\_ 3602. No \_\_\_\_\_

Explain. \_\_\_\_\_

QU: 37 What unbundled services does your firm offer? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

QU: 38 Are services managed within a separate profit center?

3801. Yes \_\_\_\_\_ 3802. No \_\_\_\_\_

QU: 39 Do you expect customers to require a broader range of services in the future?

3901. Yes \_\_\_\_\_ 3902. No \_\_\_\_\_

3903. Please explain the changes you expect to see.

\_\_\_\_\_  
\_\_\_\_\_

QU: 40 Today, how large do you believe the market is for compilers and associated development tools?

\_\_\_\_\_  
\_\_\_\_\_

QU: 41 Do you have projections for the rate of growth of this market?

\_\_\_\_\_  
\_\_\_\_\_

QU: 42 Roughly what percentage of this revenue comes from license fees? \_\_\_\_\_%

Explain the balance \_\_\_\_\_

\_\_\_\_\_

QU: 43 How would you segment the market by competitor?.

NAME	PERCENT
_____	_____%
_____	_____%
_____	_____%

QU: 43 Are new CASE vendors going to adversely impact your business?

4301. Yes \_\_\_\_\_ 4302. No \_\_\_\_\_

QU: 44 Please describe any important alliances of established vendors with new entrants in the market.

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QU: 45 What other comments can you offer about the future challenges of this market?

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QU: 46 Thank you for your time and your help on this matter. You should receive your summary report within two weeks.

I would like to verify that we have your correct mailing address. (Verify or fill out cover sheet, then ask following questions.)

QU: 47 Approximately how many sales offices do you have? \_\_\_\_\_

What is the total number of employees in your company? \_\_\_\_\_

Approximately how much revenue did your company have in 1987? \_\_\_\_\_

If interviewee can't disclose, ask the following, or go to #48.

Could you tell me if your revenues were:

4701. Over \$1 billion \_\_\_\_\_

4702. \$100 million to \$1 billion \_\_\_\_\_

4703. \$25 million to \$100 million \_\_\_\_\_

4704. Under \$25 million \_\_\_\_\_

4705. Cannot disclose revenues \_\_\_\_\_

QU: 48 Again, thank you for your time and help.









